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Installation Instructions

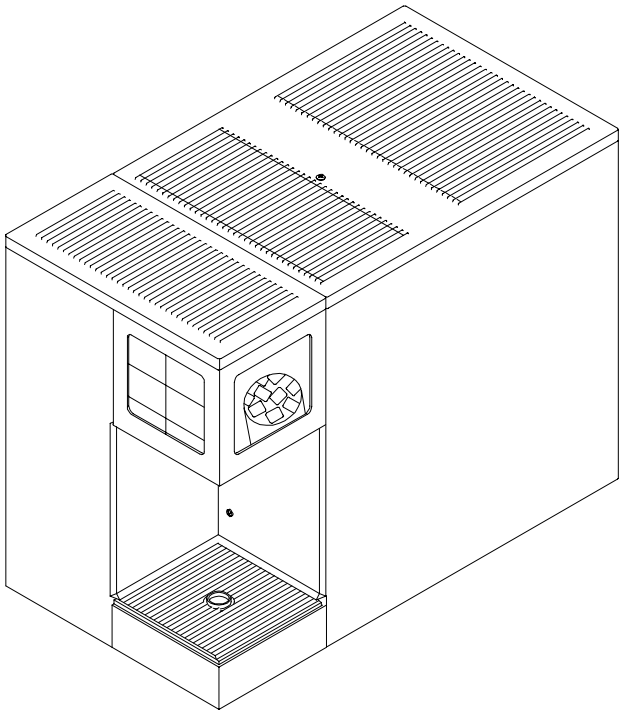
CONVERTIBLE

Post-Mix Dispenser

INSTALLATION AND SERVICE MANUAL
WITH ILLUSTRATED PARTS BREAKDOWN

PREPARED EXPRESSLY FOR

The Coca-Cola Company®



Manual Part No. 0575
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THIS DOCUMENT CONTAINS IMPORTANT INFORMATION
This Installation Manual must be read and understood before starting to install or operate this equipment.

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GENERAL DESCRIPTION

READ THIS SECTION FIRST

IMPORTANT: This manual is a guide for installing, operating, and maintaining the Convertible Post–Mix Dispenser. Refer to the table of contents for page location of detailed information on questions that arise during installation, operation, service and maintenance, or troubleshooting of this dispenser.

GENERAL DESCRIPTION

This section gives the description, theory of operation, and design data for the Four–Flavor Convertible Post–Mix Dispenser with built–in cold carbonator, hereinafter referred to as the Unit.

UNIT DESCRIPTION

(see Figure 1)

The Unit is compact and may be island–mounted or installed on a front or rear counter. Further, it is designed so that it can be readily adapted to available counter space (narrow front, or shallow depth). A full description of installation options is given in the Installation Section. The refrigeration Unit is a ‘‘lift out’’ type which is easily removed for service and maintenance. Syrup–to–water ratios in the dispensed product are readily adjustable. The Unit is configured for use with either bag–in–box (BIB) syrup containers or for use with pressurized syrup tanks. Units configured for use with bag–in–box syrup containers have internal syrup pumps and require one applied CO_2 pressure. Units using pressurized syrup tanks do not have internal syrup pumps and require two separate applied CO_2 pressures. Legs and hardware are provided for those Units to be installed outside of the USA.

Table 1. Design Data Identification

Part No.	Volts	HZ	Pumps
0080	115	60	Yes
0088	115	60	No
1275*	115	60	Yes
1276*	115	60	No

NOTE: * U.S.A. only

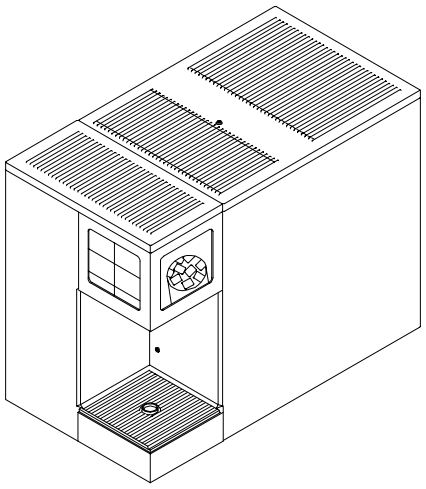

FIGURE 1. CONVERTIBLE POST-MIX DISPENSER

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Physical Characteristics and Requirements

Overall dimensions:	
Width	12–1/2 in. (31.75 cm)
Height	17–7/8 in. (45.4 cm)
Depth	23–1/4 In. (59 cm)
weights	
Shipping (one carton)	77 lb. (35 Kg)
Dry Weight (approx.)	72 lb. (32.5 Kg)
Ice Bank Weight (approx.)	8 lb (3.6 Kg)
Refrigeration Assembly	36 lb. (16.3 Kg)
Water Tank Capacity (without ice bank)	4.6 gallons (17 liters)

Countertop Dispensing Capacity:

75 degree ambient (23.9 degrees C): fifty 12 oz. drinks dispensed at or below 40 degrees F. (4.4 degrees C) with syrup and water inlet temperatures at 75 degrees F. (23.9 degrees C).

90 degree ambient (32.2 degrees C): twenty five 12–oz. drinks dispensed at or below 40 degrees F (4.4 degrees C) with syrup and water inlet temperature at 90 degrees F (32.2 degrees C).

Refrigeration:	
Compressor Horsepower with evaporator coil at 20 degrees F. (1/8 HP)	1120 BTU

Refrigerant R12 5.5 oz.

Ambient Operating Temperature
40 degrees F (4.4 degrees C) to
90 degrees F (32 degrees C)

Electrical Requirements
115VAC, 60HZ 5.6 Amps

Inlet Water Requirements:
Minimum Flow Pressure 25 PSIG
(1.8 Kg/cm2; 1.7 BAR)
Maximum Static Pressure 40 PSIG
(2.8 Kg/cm2; 2.8 BAR)

CAUTION: If water source exceeds 40 PSIG (2.81 Kg/cm2), a water regulator kit must be used to avoid improper Unit performance or damage. Refer to kit list for part number.

NOTE: Water pressure must be less than the CO_2 pressure and must be within the maximum and minimum limits.

CO_2 Requirements:
Bag–in–Box Units
Maximum Pressure
80 PSIG (5.6 Kg/cm2;5.5 BAR)
Minimum Pressure
70 PSIG (4.9 Kg/cm2; 4.8 BAR)

Syrup Tank Units
Carbonator
Maximum Pressure 80 PSIG (5.6 Kg/cm2; 5.5 BAR)
Minimum Pressure 70 PSIG (5.2 Kg/cm2; 4.8 BAR)

Syrup Tanks
Recommended Pressure
Sugar: 40 PSIG (2.8 kg/cm2; 2.8 Bar)
Diet: 6–12 PSIG (0.42 – 0.85 Kg/cm2; 0.4 0.83 BAR)

INSTALLATION KITS

The following kits are separately available for the Convertible Post–Mix Dispenser.

Bag–in–Box Installation Kit P/N 0102 (USA).Provides the necessary parts to connect syrup, CO_2 and water to a Unit having internal syrup pumps.

Bag–in–Box Installation Kit P/N 0104 (metric).Provides the necessary parts to connect syrup, CO_2 and water to a Unit having internal syrup pumps.

Syrup Tank Installation Kit P/N 0103 (US).Provides necessary parts to connect syrup, CO_2 and water to a Unit without internal syrup pumps.

Syrup Tank Installation Kit P/N 0105 (metric). Provides necessary parts to connect syrup, CO_2 and water to Unit without internal syrup pumps.

Water Pressure Regulator Kit P/N 0107.Regulates water pressure on water inlet supply line. Pressure is factory–preset to 30 PSIG.

NOTE: The water pressure regulator is required in locations where the water pressure exceeds 40 PSIG (2.8 Kg/cm2; 2.8 BAR). Ideal water pressure ranges from 25 to 40 PSIG.

PLAIN WATER CONVERSION KIT P/N 0106.

The plain water conversion kit, when installed, allows plain water only to be dispensed and the Unit may be set up to also dispense a combination of carbonated and still (non–carbonated drinks).

ICE TEA KIT P/N 1347.

The ice tea kit contains the parts required to convert syrup system No. 4 to provide an ice tea drink.

LEG KIT P/N 1294.

The leg kit, when installed, raises the Unit four inches above the countertop. Such an installation relieves U.S. users from the NSF requirement to seal the Unit to the countertop.

DECAL KITS

The following decal kits are available:

Kit Part Number	Applicable To
0110	United States of America
0111	Australia
0112	China
0113	France
0114	Germany
0115	Italy
0116	Japan
0117	Mexico
0118	Philippines
0119	Taiwan
0120	United Kingdom
0795	Spain
0796	Korea
0797	Holland
0798	Argentina

THEORY OF OPERATION

Design Note: All Units delivered from the manufacturer are configured to dispense carbonated drinks and carbonated water. Any Unit may have an optional installation plain water kit field–installed which allows dispensing of plain water or dispensing of ‘‘still’’ (non–carbonated) drinks. Refer to list of kits for part numbers.

Units with Bag–in–Box Syrup Supply

(see Figure 2)

Regulated CO_2 gas from a cylinder provides pressurization through a manifold to the syrup pumps and to a carbonator, both within the Unit. Plain water, pumped under pressure by the carbonator pump into the carbonator tank absorbs the gas and is thereby carbonated. When a drink dispense switch or soda (carbonated water) only switch is pressed, the carbonated water solenoid valve is opened and CO_2 pressure within the carbonator drives carbonated water from the carbonator through carbonated water cooling coils in the water tank, then through a carbonated water flow control to the dispensing nozzle. When a drink–dispense switch is pressed, a related syrup solenoid valve is also opened,allowing the syrup pump to start, forcing syrup through the syrup cooling coil in the water tank, the adjustable syrup flow control, the solenoid valve and on to the dispensing nozzle. Syrup and carbonated water meet simultaneously at the dispensing nozzle to produce a carbonated drink flowing from the nozzle. Units with a plain water kit can also dispense only plain water. Units may also be configured to dispensed up to four still (non–carbonated) drinks.

Units with Syrup Tanks

(see Figure 3)

Regulated CO_2 provides pressurization for the syrup tanks and gas to the carbonator within the Unit. Plain water, pumped under pressure by the carbonator pump into the carbonator tank absorbs the gas and is thereby carbonated. When a drink dispense switch or soda (carbonated water) only switch is pressed, the carbonated water solenoid valve is opened and CO_2 pressure within the carbonator drives carbonated water from the carbonator through carbonated water cooling coils in the water tank, then through a carbonated water flow control to the dispensing nozzle.

When a drink–dispense switch is pressed, CO_2 pressure exerted on the syrup tank contents drives syrup from the syrup tank, through an individual syrup cooling coil in the water tank, then through an adjustable syrup flow control to the dispensing nozzle. Syrup and carbonated water meet simultaneously at the dispensing nozzle to create a carbonated drink flowing from the nozzle. Units equipped with a plain water kit can also dispense plain water. Units also may be converted to dispense up to four still (non–carbonated) drink types.

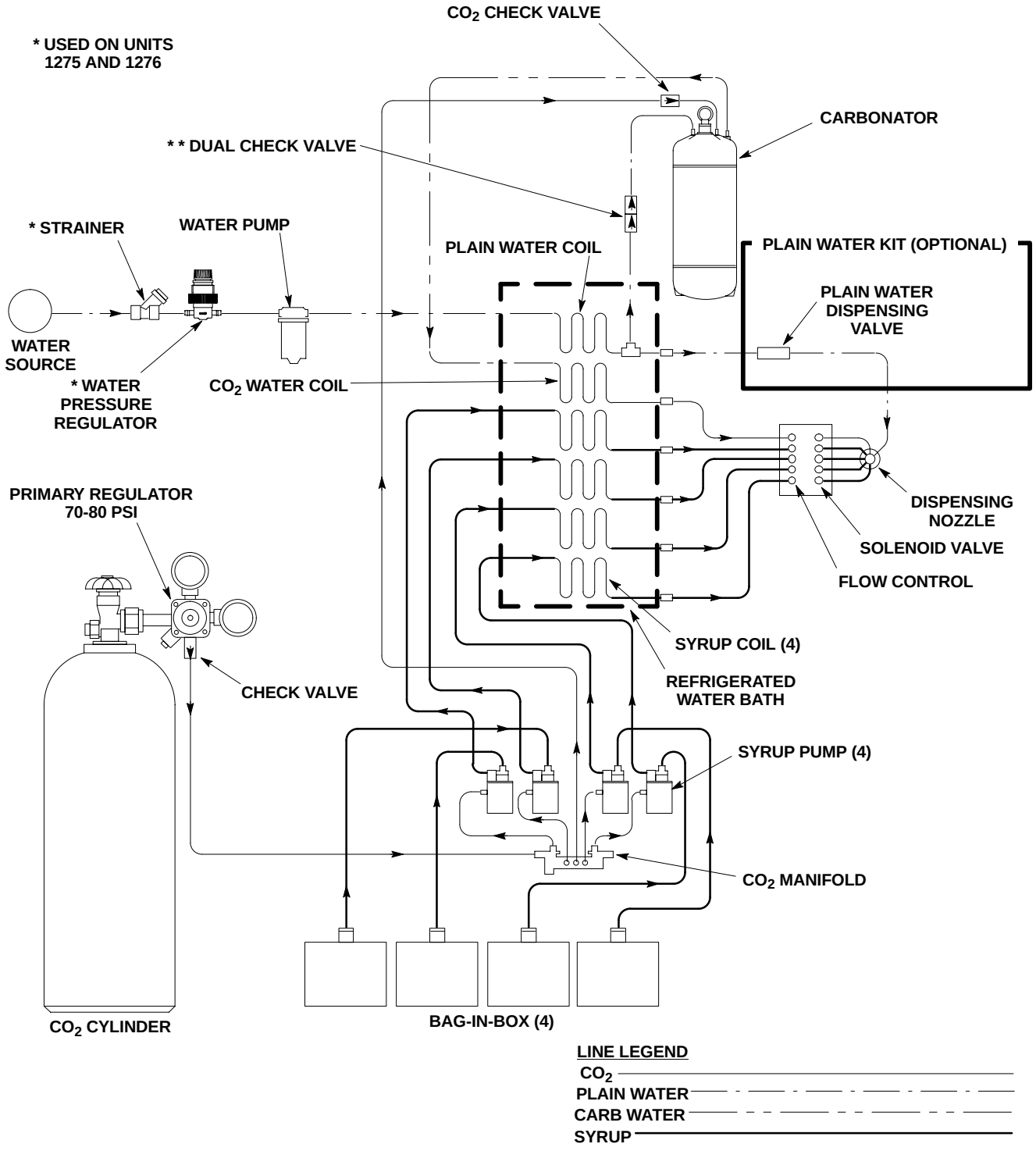


FIGURE 2. UNIT WITH BAG-IN-BOX SYRUP SOURCE - FLOW DIAGRAM

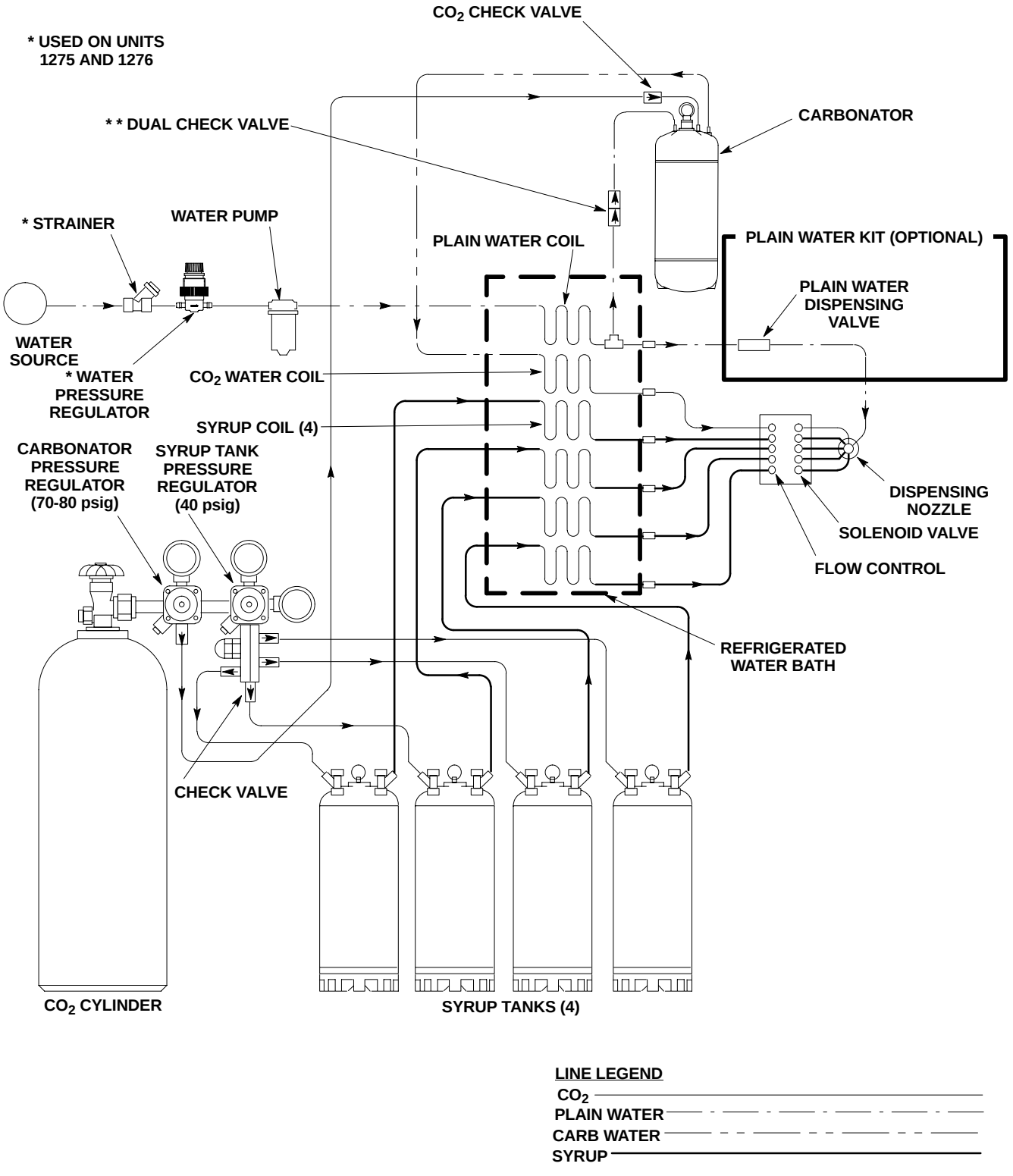


FIGURE 3. UNIT WITH SYRUP TANKS - FLOW DIAGRAM

INSTALLATION

This section provides instructions for receiving, unpacking and inspection, location selection, installation, and preparation for operation.

RECEIVING

Each Unit is completely tested under operating conditions and thoroughly inspected before shipment. At time of shipment, the carrier accepts the Unit and any claim for damage in transit must be made with the carrier. Upon receiving Unit from the delivering carrier, carefully inspect the carton for visible indication of damage. Any damage or irregularities should be noted at this time (not later than 15 days from date of delivery) and immediately reported to the delivering carrier. Request a written inspection from the carrier's claims inspector to substantiate claim. File claim with the delivering carrier not with IMI Cornelius Inc.

UNPACKING AND INSPECTION

UNPACK A UNIT AS FOLLOWS:

1. Cut two bands.
2. Lift carton wrap off Unit.
3. Remove top foam packaging. Retain installation manual, decal kit and electric plug (if applicable).

CAUTION: Unit must be lifted by its base. To avoid damage, do not lift using valve housing or pump wrap.

4. Lift Unit off base foam packaging.
5. Carefully inspect Unit for evidence of damage. If evidence of damage is found, notify delivering carrier and file a claim against the carrier.
6. Remove loose–shipped parts from carton. Check contents per Table 2–1.

TABLE 1 LOOSE–SHIPPED PARTS

Part No.	Part Description	Model No. / Qty			
		0080	0088	1275	1276
2175	Drip Tray	1	1	1	1
0071	Cup Rest	1	1	1	1
XXXX	Decal Kit (as ordered by customer)	1	1	1	1
0110	Flavor Kit	–	–	1	1
0581	Legs	6	6	6	6
0582	Screws	6	6	6	6
0639	Abbreviated Installation Manual	1	1	1	1
0566	Syrup Inlet Tube Ass'y	–	–	4	–
1062	Bag Seal 9x12 W/Backing	1	1	1	1
1331	Tube Cut 500 Vin x72"	–	–	1	1
2143	Plug	1	–	1	–
180025-000	O-Ring	4	–	–	–
310461-000	Thread Rolling Screw	2	2	2	2

LOCATION SELECTION

The Unit may be island–mounted or installed on a front or rear counter provided that the following requirements are satisfied.

WARNING: All electrical wiring must conform to national and local electrical codes.

1. Locate Unit near a grounded electrical outlet having a dedicated circuit fused at 15 amps (slow–blow) for 115VAC units. Alternate protection using an equivalent HACR (US) circuit breaker may be used.

CAUTION: Condenser coil cooling air is drawn into and discharged from the top of the Unit. Failure to provide sufficient clearance over the top of the Unit may cause the compressor to overheat and fail. A minimum of 14 in. (35 cm) clearance is required over the top of the Unit.

2. Locate Unit so that a minimum of 14 inches (35 cm) clearance exists over the top of the Unit.

IMPORTANT: Bag–in–Box Units are provided with 8 ft. (2.4 M) syrup lines. The difference in height between the Unit and the bag–in–box syrup containers must not exceed 8–ft. (2.4 M).

3. Locate Unit close to a water inlet supply line with pressure and flow as given in the listing of Physical Characteristics and Requirements.

INSTALLATION

NOTE: The following text gives the steps to fill the water tank and start the refrigeration system. Note: cool down may require two or more hours. However, if a countertop installation is to be made which requires locating a hole in the countertop, or if the base of the Unit is to be sealed to the countertop (USA), (procedures per Addendum A) should be completed before the Unit is filled with water.

FILLING WATER TANK AND STARTING REFRIGERATION SYSTEM.

1. Remove screw in large (top) cover, and remove the large cover.

CAUTION: The carbonator water pump motor must be electrically disconnected to avoid damage to the pump by running dry.

2. Disconnect water pump electrical connector at the control box located in the refrigeration compartment. Plastic locks both top and bottom must be released before connector can be unplugged.

3. Remove plastic plug from the water tank fill–hole centered in front of the condenser coil.

4. Install drip tray first, followed by the cup rest which is placed on the drip tray.

5. Place funnel in water fill hole.

NOTE: The water tank must be completely filled before applying electrical power to the Unit to ensure correct operation of the refrigeration Unit. The refrigeration system will not operate without water in the water tank. The presence of water must be detected by electronic ice bank control probes within the water tank.

6. Fill water tank with approximately 4–1/2 gallons (17 liters) of water until water flows out of the tank overflow tube into the drip tray.

7. Remove funnel and replace plastic plug in the water fill hole.

CAUTION: Unit must be electrically grounded to avoid possible fatal electrical shock or serious injury to the operator. The power cord is provided with a three–prong grounded plug. If a three–hole (grounded) electrical outlet is not available, use an approved method to ground the Unit.

8. Remove any shipping materials from refrigeration compartment.

9. Connect the Unit power plug to a grounded electrical outlet having correct voltage and amperage rating. Compressor, condenser fan motor and agitator motor will start. When a full ice bank is formed, compressor and condenser fan motor will stop, but agitator motor will continue to run. As the ice bank forms, excess water will run out through the overflow tube into the drip tray.

CONVERSION OPTION

The Unit is readily configured from the standard narrow front configuration to a shallow depth configuration as shown in Figure 4. If this option is required, proceed as follows, referring to Figure 5. This option consists simply of interchanging the positions of the logo panel and the dispense switch module, no additional parts are required.

1. Remove small (tower) by lifting cover up and off Unit.

2. Remove two screws securing top of logo panel to the tower.

3. Lift logo panel up out of the tower.

4. Remove two screws securing top of dispense switch module to the tower.

CAUTION: Use care in handling the dispense switch module and its attaching electrical conductors.

5. Carefully separate dispense switch module from its position in the tower.

6. Install dispense switch module in the tower opening from which the logo panel was removed.

7. Secure top of the switch module with two screws.

8. Install logo panel in the tower opening from which the dispense switch was removed.

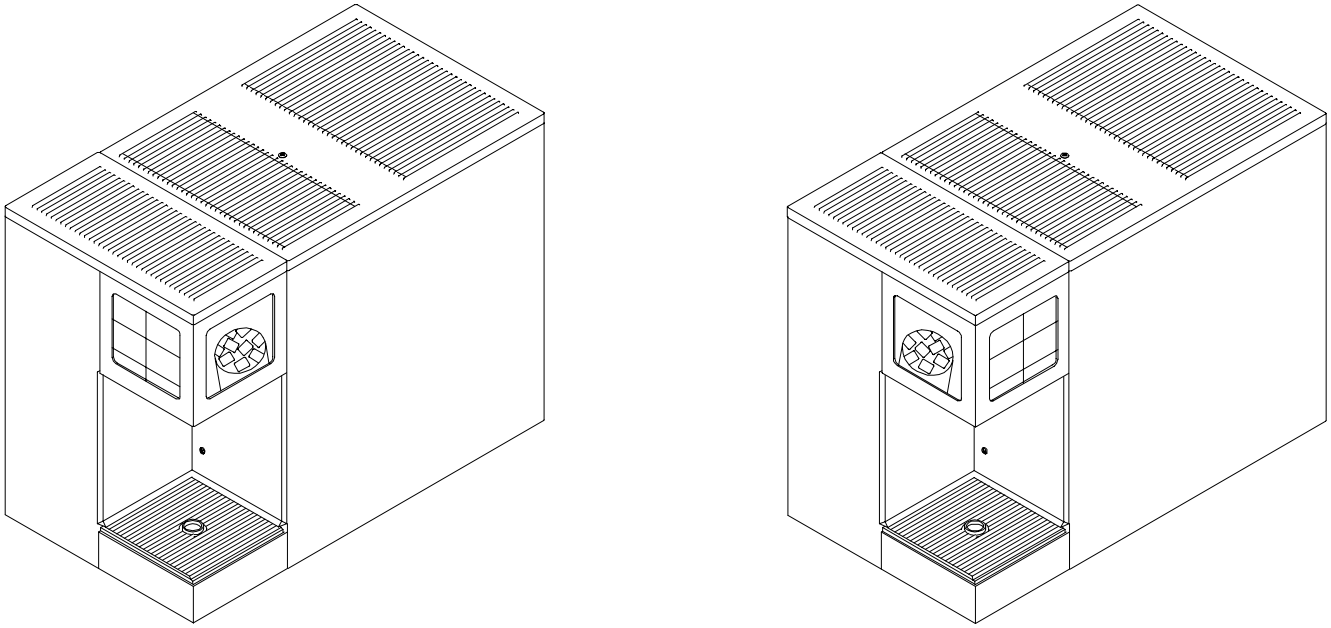
9. Secure top of logo panel with two screws.

COUNTERTOP HOLE LOCATION

This procedure is used when water, syrup, CO_2 and electrical connections are to be run through the countertop to the Unit. To locate and make a cutout in the countertop proceed as follows:

1. Place the Unit in operating position on the countertop.

2. Using a pencil or masking tape, mark three corners of the tower as shown in Figure 6 .



STANDARD NARROW FRONT

SHALLOW DEPTH

FIGURE 4. NARROW AND SHALLOW DEPTH CONFIGURATIONS

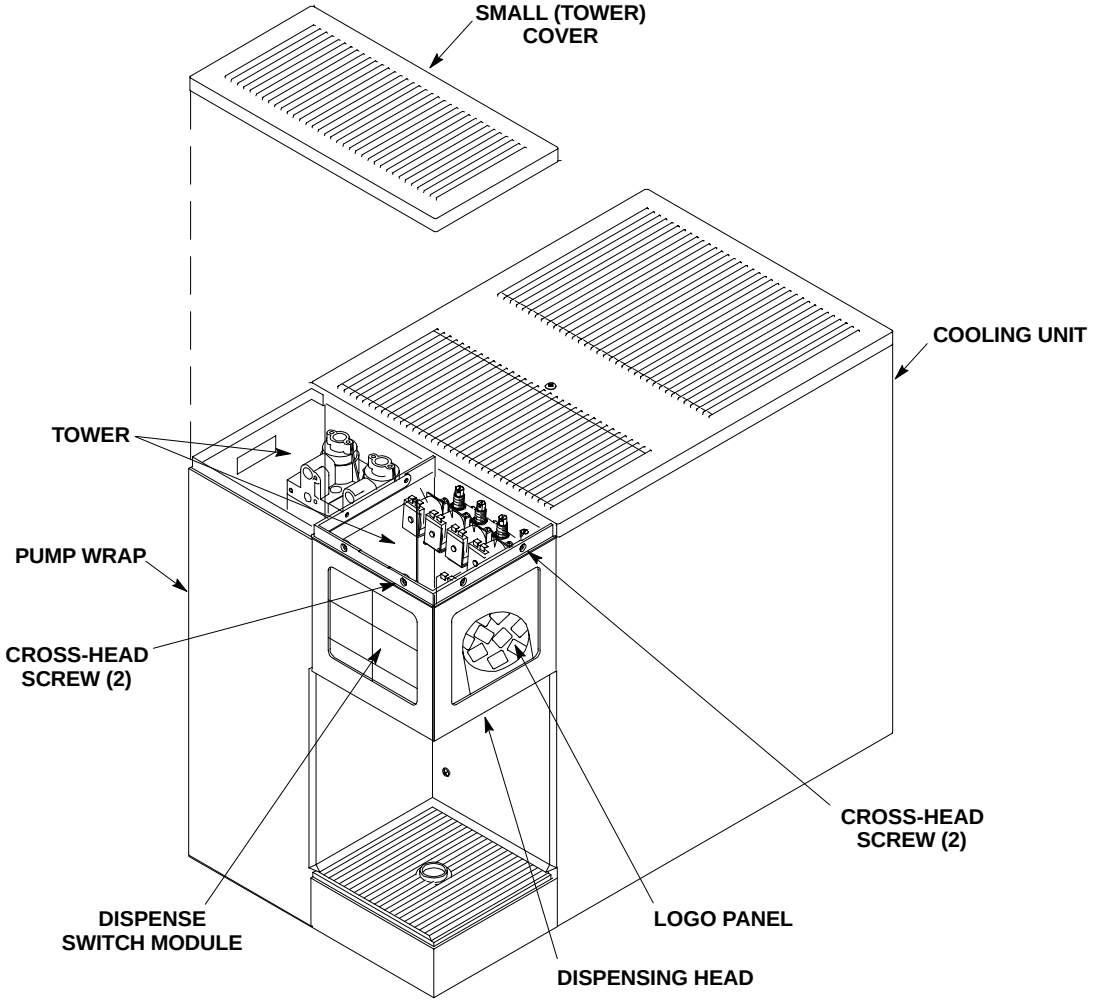


FIGURE 5. CONVERSION DETAIL

3. Move the Unit to one side.

4. Using the three marks as a guide, mark the center of a three–inch (7.5 cm) diameter hole on the countertop.

5. Cut a hole in the countertop at the location marked in previous step.

6. Move the Unit into position over the hole.

SEALING UNIT BASE TO COUNTERTOP.

Refer to Addendum A for procedure required by the NSF International (NSF) for Units installed in the USA only.

NOTE: All connections must be made before the Unit is sealed to the countertop.

MAKING WATER, CO_2, SYRUP, AND ELECTRICAL CONNECTIONS.

CONNECT WATER:

Make water connections as follows:

CAUTION: If water source exceeds 40 psig (2.8 KG/Cm2) a water pressure regulator kit must be used to ensure correct Unit operation. Refer to Installation Kits paragraph for part number.

CAUTION: Do not use a saw to cut tubing, use a tubing cutter or knife to avoid contamination of tubing with particles of material.

CAUTION: Water pipe connections and fixtures directly connected to a potable water supply shall be sized, installed and maintained according to federal, state, and local laws.

1. Connect tubing to water source, but do not connect to Unit at this time. Allow three feet (92 cm) extra tubing length below the countertop for servicing the Unit.

2. Check water pressure. If water pressure is greater than 40 psig (2.8 Kg/Cm2), install a water pressure regulator.

3. Flush water supply line thoroughly by running four gallons (15 liters) of water to drain.

4. Remove one screw, and remove large cover from the Unit.

5. Remove small cover from the Unit.

6. Remove two screws at the top left rear of the bulkhead panel and lift the pump wrap from the Unit.

7. Route water supply tubing through hole in countertop and through hole in bulkhead panel and connect to carbonator pump inlet using a flare seal washer. Use a back up wrench to avoid damaging the carbonator pump.

8. Route the water tank drain line (NSF requirement for USA installations) down through the countertop hole. Note that the end is plugged.

9. Turn on the water supply and check for leaks.

10. If a pressure regulator other than one supplied with the Unit is installed, set it to 30 PSIG (2.112 Kg/Cm2).

CONNECT CO_2

Connect CO_2 supply as follows:

WARNING: Always secure the CO_2 cylinder with a safety chain to prevent it from falling over. A broken valve may allow the cylinder to act as a projectile, causing serious injury or property damage.

1. Place CO_2 cylinder in service location and secure it with a safety chain.

2. Connect CO_2 pressure regulator assembly to CO_2 cylinder. Use a new coupling washer if the regulator coupling does not have a built–in O–ring seal. (see Figures 7 and 8).

CAUTION: Do not apply CO_2 pressure to the line at this time.

3. Using approved 0.265 I.D. tubing, and fittings from the installation kit, connect the tubing assembly to the regulator using a flare seal washer. Use a back up wrench to prevent damage to the regulator assembly.

4. Route CO_2 tubing up through the hole in the countertop, leaving three feet (92 cm) of extra tubing below the countertop for servicing the Unit.

5. Route the tubing through the tower (pump wrap) and the Unit bulkhead panel.

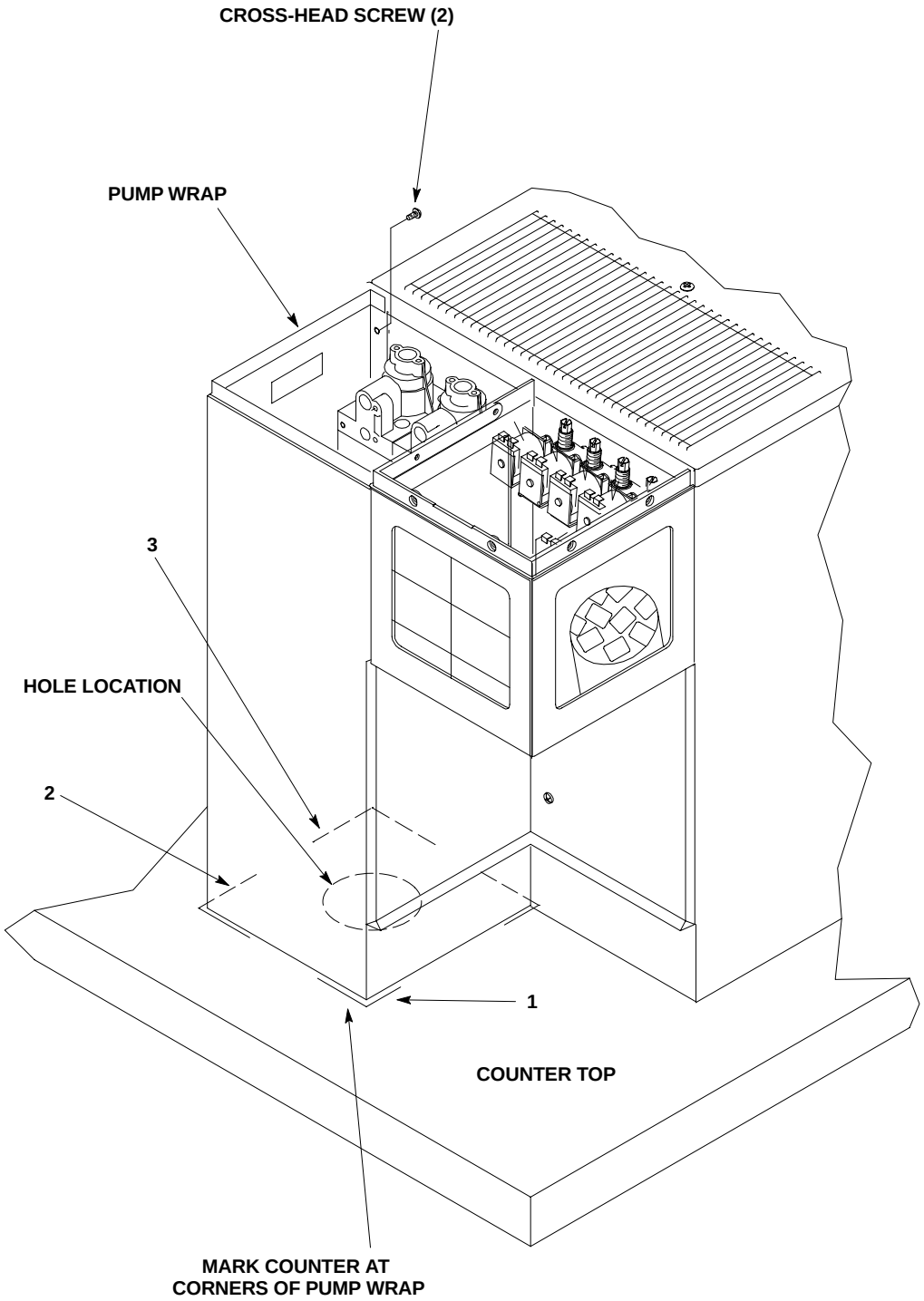


FIGURE 6. COUNTERTOP HOLE LOCATION

6. In the bag–in–box Unit, connect the CO_2 line to the CO_2 manifold located below the syrup pumps. (see Figure 9 & 10). In Units with syrup tanks, route the CO_2 line through the bulkhead panel and connect the line–end connector to the CO_2 inlet on the carbonator tank check valve using a flare seal washer.

7. In Units with syrup tanks, connect secondary regulator CO_2 pressure lines to each syrup tank.

WARNING: CO_2 Displaces Oxygen. Strict Attention *must* be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, immediately ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

CONNECT SYRUP LINES

Connect syrup lines within the Unit as follows:

IMPORTANT: All syrup systems must be sanitized before Unit is put into operation.

1. Sanitize all syrup systems after connecting syrup lines following instructions below. Refer to Addendum B for sanitizing procedure.

NOTE: Refer to Figure 9 for location and identification of the dispense switches.

NOTE: Coca–Cola should always be in position No. 1 on the switch panel, as this position has a longer cooling coil than the other three positions.

2. Route one syrup line for each product up through the hole in the countertop.

3. Refer to the decal on inside of the large (top) cover for location of product decals and identification of syrup connections. (see Figure 9).

4. Apply product decals from the kit to dispense switches to correspond to the product dispensed.

NOTE: Lubricate O–rings before installation using food–grade non–petroleum base lubricant, e.g., Dow–Corning 111 or equivalent.

5. On bag–in–box Units, refer to Figures 10, and 11. Lubricate O–rings and connect each syrup line to that syrup pump corresponding to the dispense switch to be used, by inserting line end fittings into inlet on top of the pump, and securing there to the pump by tightening a modified (notched) phillips hold–down screw against the collar on the line end fitting.

6. On tank Units, connect each line to a numbered syrup cooling–coil line end within the pump wrap, using stepless clamps.

CONNECT SYRUP LINES TO SYRUP SOURCES

Connect syrup lines to syrup sources for bag–in–box or tank Units as described in Operator's Instructions.

CAUTION: Do not plug into power outlet at this time.

MAKE ELECTRICAL CONNECTIONS

Route Unit power cord down through the pump wrap area and countertop hole, and bring it out near the power outlet, but do not plug it in at this time. (If power cord plug is loose–shipped with Unit, install it on power cord end in compliance with applicable codes and regulations).

PREPARATION FOR OPERATION

This subsection provides information needed to set up the product selection panel, purge the carbonator system, start up the Unit, and adjust the water–to–syrup ratio.

PLAIN WATER AND STILL DRINKS

All Units as shipped will dispense only carbonated drinks. Units that are equipped with the plain water kit can dispense plain water, and may also be set to dispense from zero to four "still" (non–carbonated) drinks by use of drink selection switches 1 through 4 as described in the following procedure.

1. Remove two cross–head screws from the top of the dispense switch module (see Figure 5).

2. Lift dispense module carefully up and out for access to circuit board.

NOTE: On the rear of the dispense panel circuit board are four plug–in selectors labelled with numbers and flavors corresponding to the numbering on the front of the dispense panel. Each selector has two positions, "soda" and "water", as shown in Figure 9.

3. To convert flavors 1, 2, 3, or 4 to dispense plain water, pull the applicable plug–in selector from its circuit board pins and shift it to the left, one pin, and reinstall it on these pins.

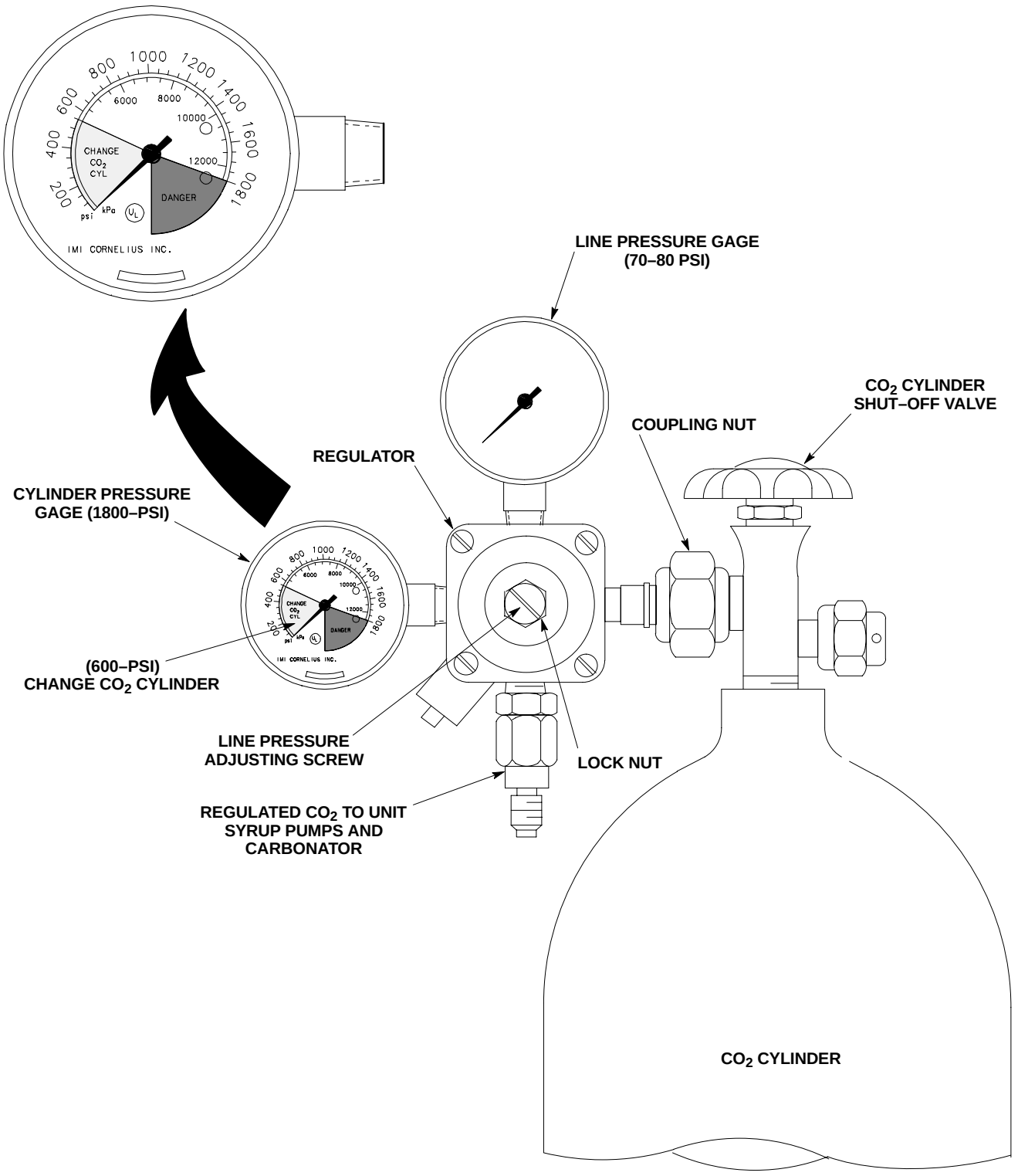


FIGURE 7. BAG–IN–BOX CO_2 SUPPLY

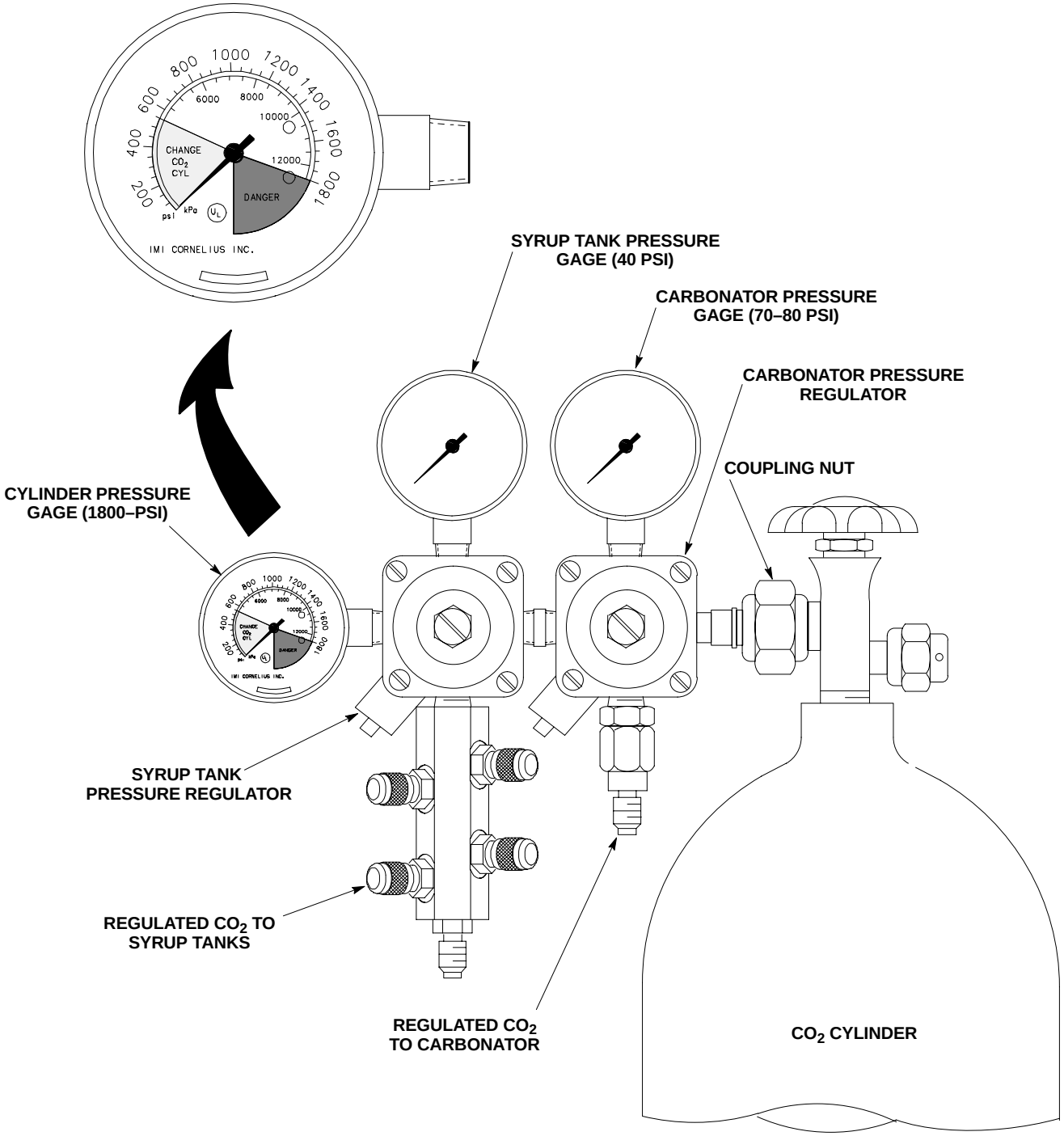


FIGURE 8. SYRUP TANK CO_2 SUPPLY

NOTE: The selection switch to disable the soda only and plain water only button work the same as the selectors for buttons 1 thru 4. The selection switch can be located one of two places, the upper left corner or the lower left corner. (see Figure 9). Units are shipped with the switch in the on position which will enable the soda only (S) or plain water only (W) button to operate. When requested they are set in the off position which will disable the soda only and plain water only buttons, making them inoperative.

4. Install dispense switch module in the Unit and secure it with two cross–head screws.

PURGING THE CARBONATOR SYSTEM

1. Disconnect electrical power from the Unit.

2. Turn on water to the Unit.

3. Flood the system with water to drive out air as follows:

   A. Lift the relief valve on the carbonator until water flows out of the valve.

   B. Manually open the S (soda) dispensing valve until water flows freely from the nozzle with no indication of air.

4. At the CO_2 cylinder pressure regulator, loosen the locking nut on the pressure adjusting screw, and turn the pressure adjusting screw fully CCW.

5. Open CO_2 cylinder valve slowly.

6. Turn the pressure regulator pressure adjusting screw slowly CW to provide a pressure of 50 psig (3.5 Kg/Cm2; 3.44 BAR) priming pressure.

7. Tighten the locking nut.

8. Open the S (soda) dispensing valve manually to drive all water from the carbonator and CO_2 water coil.

9. Connect the water pump electrical connector to the control box connector.

10. Apply electrical power to the Unit.

NOTE: The electronic control incorporates a time delay for compressor start. On initial start up, or whenever power is interrupted, *compressor may not start for 5 minutes.*

NOTE: The water pump is equipped with a timer which will allow it to run continuously a maximum of five minutes, after which the motor will stop. The timer can be reset by momentarily removing electrical power to the Unit. The pump motor will then operate as needed.

11. At the Unit, press the ‘‘soda” or S selector intermittently until the carbonator has cycles at least three times. Soda water should be clear and well carbonated.

12. At the pressure regulator, loosen the locking nut on the pressure adjusting screw and turn the screw clockwise to provide a pressure between 70 PSIG (4.9 Kg/Cm; 4.8 BAR) and 80 PSIG (5.6 Kg/CM; 5.5 BAR). Tighten the locking nut.

PURGING THE SYRUP SYSTEMS

1. Place a cup under the nozzle.

2. Manually open each syrup valve in turn and observe syrup flow. Purging is completed when all air is removed from the system. If syrup continues to show air bubbles, check tightness of line connections. See Figure 31 for manual operation of dispensing valves.

ADJUSTING WATER–TO–SYRUP RATIO OF DISPENSED PRODUCT

The water–to–syrup ratio is measured by use of a ratio cup (see Figure 12) having two chambers into which the soda and a selected syrup are dispensed. The ratio, if incorrect, is adjusted by turning the related syrup flow regulator adjusting screw located on top of each syrup dispense solenoid valve.

NOTE: Allow the refrigeration Unit to operate for at least an hour before making this adjustment. The drink temperature should be no higher than 40 degrees F (4.4 degrees C).

1. Remove the small cover over the dispensing nozzle and solenoids.

2. At the top of the dispensing nozzle, grasp the upright plastic extension on the water tube, and pull the water tube from the center of the nozzle (position A in Figure 12) then insert the water tube into the molded tube (position B) in front of the dispensing nozzle.

3. Hold the ratio cup under the dispensing nozzle so that the large chamber of the ratio cup is under the molded tube, and the smaller chamber is under the dispensing nozzle.

4. Starting with the most viscous syrup, (orange), press the selection switch to draw a drink into the two parts of the ratio cup, until the ratio cup is at least two–thirds full.

5. Place the ratio cup on a level surface, and observe that the soda and syrup levels are at the same level. If not, use a screwdriver to adjust the syrup flow regulator adjusting screw by 1/4 turn at a time. Clockwise rotation of the screw will increase the syrup flow, and counterclockwise rotation of the screw will decrease the syrup flow. Check the adjustment by drawing a drink. Repeat steps 4 and 5.

NOTE: If the most viscous syrup cannot be set by adjusting the syrup flow regulator, increase the CO_2 pressure by 5 PSIG (0.35 Kg/Cm2; 0.34 BAR), and repeat the adjustment. After the most viscous syrup ratio is set, do not change the CO_2 pressure. For bag–in–box installations, do not adjust regulator higher than 80 PSIG. (5.6 Kg/Cm2; 5.5 BAR).

6. Adjust the ratios for the remaining selections following the same procedure.

7. At the top of the dispensing nozzle, grasp the upright plastic extension on the water tube and lift the water tube from the molded tube and insert it into the center of the nozzle.

8. Replace the small cover.

ADJUSTING CO_2 PRESSURE

BAG–IN–BOX CO_2 SUPPLY

WARNING: Wear protective eyewear to avoid injury from gas–driven particles.

If line pressure shown on the line pressure gage (see Figure 7 falls below 70 PSIG (4.9 Kg/Cm2; 4.8 BAR), and the cylinder pressure gage pointer is outside the CHANGE CO_2 CYLINDER zone, adjust the line pressure as follows:

1. At the pressure regulator, use a small wrench to loosen locking nut on the pressure adjusting screw by turning it in a counterclockwise direction.

2. Using a screwdriver, slowly turn the line pressure adjusting screw clockwise to increase line pressure. Counterclockwise rotation will lower line pressure.

3. Tighten locking nut by turning it clockwise.

SYRUP TANK CO_2 SUPPLY

WARNING: Wear protective eyewear to avoid injury from gas–driven particles.

If line pressure to the syrup tanks shown on the syrup tank pressure gage (see Figure 8) falls below 40 PSIG (2.8 Kg/Cm2; 2.85 BAR), and the cylinder pressure gage pointer is outside the CHANGE CO_2 CYLINDER zone, adjust the syrup tank pressure regulator.

If line pressure to the carbonator shown on the carbonator gage (see Figure 8) falls below 70 PSIG (4.9 Kg/cm2: 4.8 BAR), and the cylinder pressure gage pointer is outside the CHANGE CO_2 CYLINDER zone, adjust the carbonator pressure regulator as follows:

1. At the pressure regulator, use a small wrench to loosen the locking nut on the pressure adjusting screw by turning it in a counterclockwise direction.

2. Using a screwdriver, slowly turn the line pressure adjusting screw clockwise to increase line pressure. Counterclockwise rotation will lower line pressure.

3. Tighten locking nut by turning it clockwise.

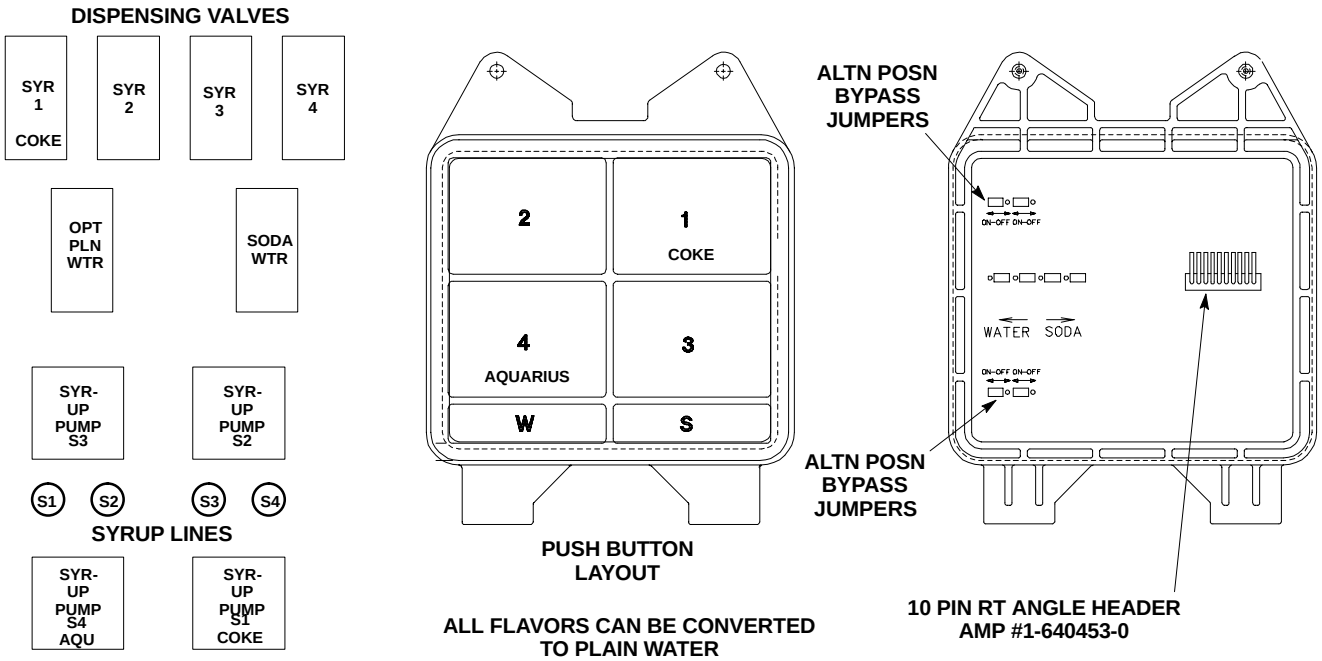
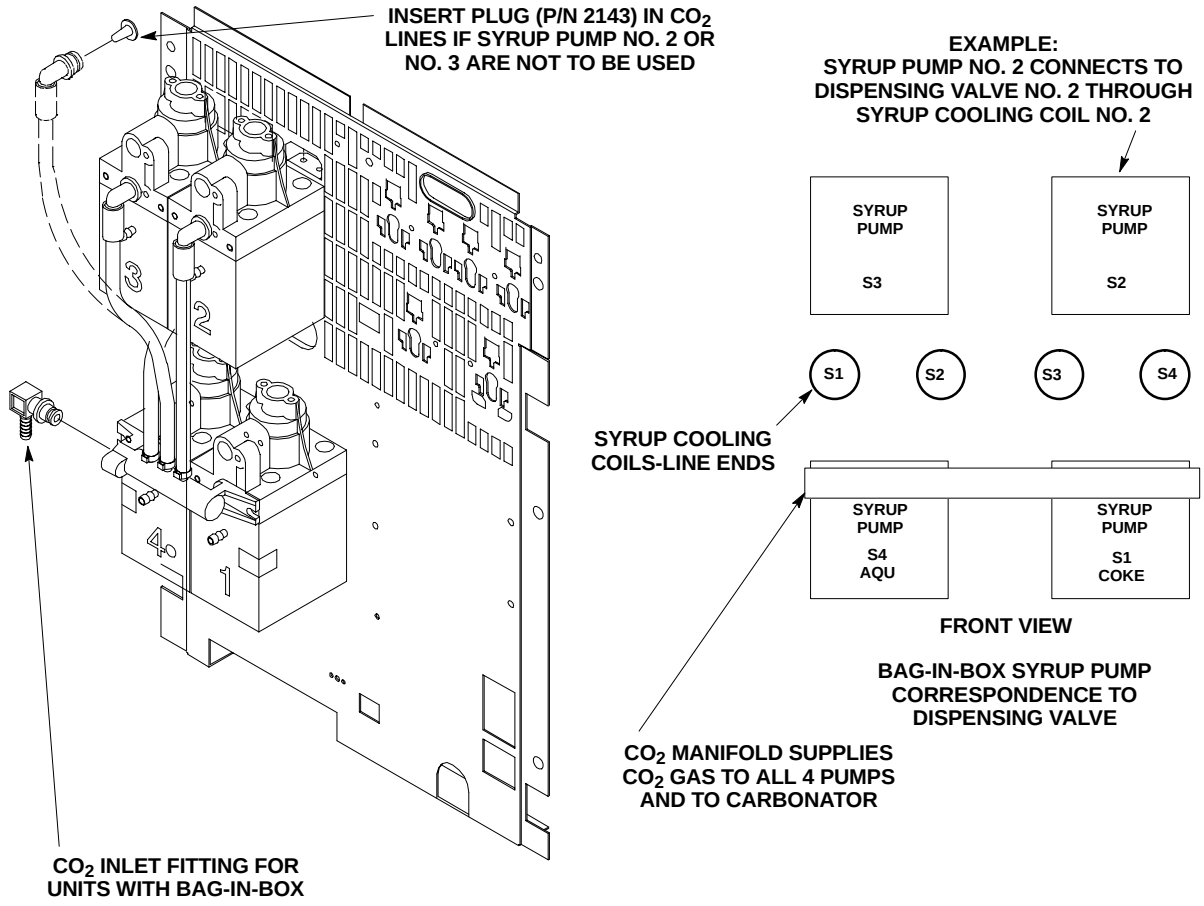


FIGURE 9. COVER DECAL (PRODUCT SELECTION PANEL DETAIL


INSERT PLUG (P/N 2143) IN CO_2 LINES IF SYRUP PUMP NO. 2 OR NO. 3 ARE NOT TO BE USED
EXAMPLE: SYRUP PUMP NO. 2 CONNECTS TO DISPENSING VALVE NO. 2 THROUGH SYRUP COOLING COIL NO. 2
SYRUP PUMP S3
SYRUP PUMP S2
S1
S2
S3
S4
SYRUP COOLING COILS-LINE ENDS
SYRUP PUMP S4 AQU
SYRUP PUMP S1 COKE
FRONT VIEW
BAG-IN-BOX SYRUP PUMP CORRESPONDENCE TO DISPENSING VALVE
CO_2 MANIFOLD SUPPLIES CO_2 GAS TO ALL 4 PUMPS AND TO CARBONATOR
CO_2 INLET FITTING FOR UNITS WITH BAG-IN-BOX

B. BAG-IN-BOX PUMP DETAIL

FIGURE 10. BAG–IN–BOX PUMP DETAIL

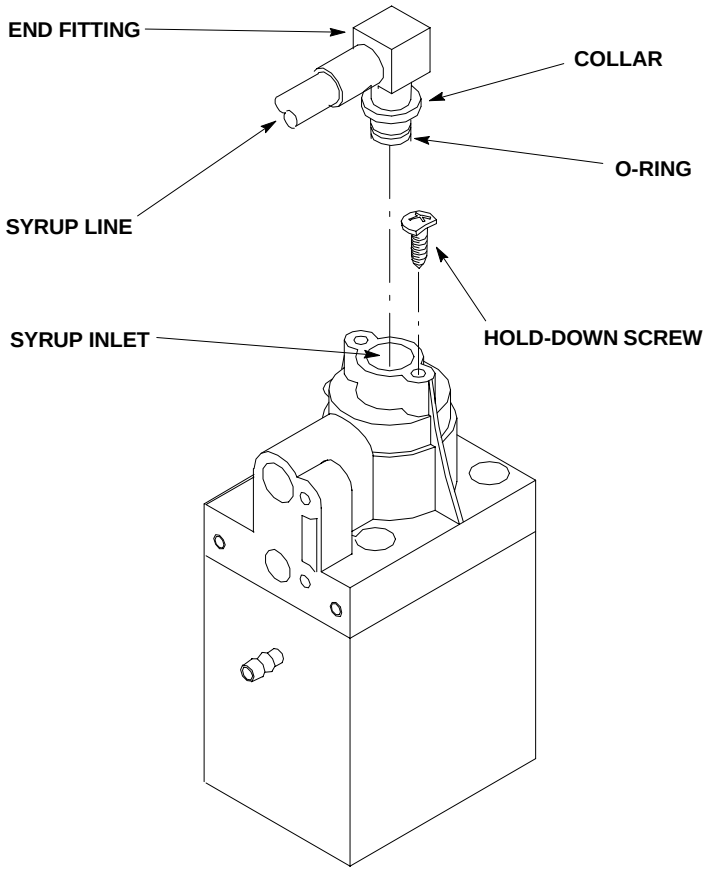


FIGURE 11. SYRUP LINE CONNECTION TO SYRUP PUMP

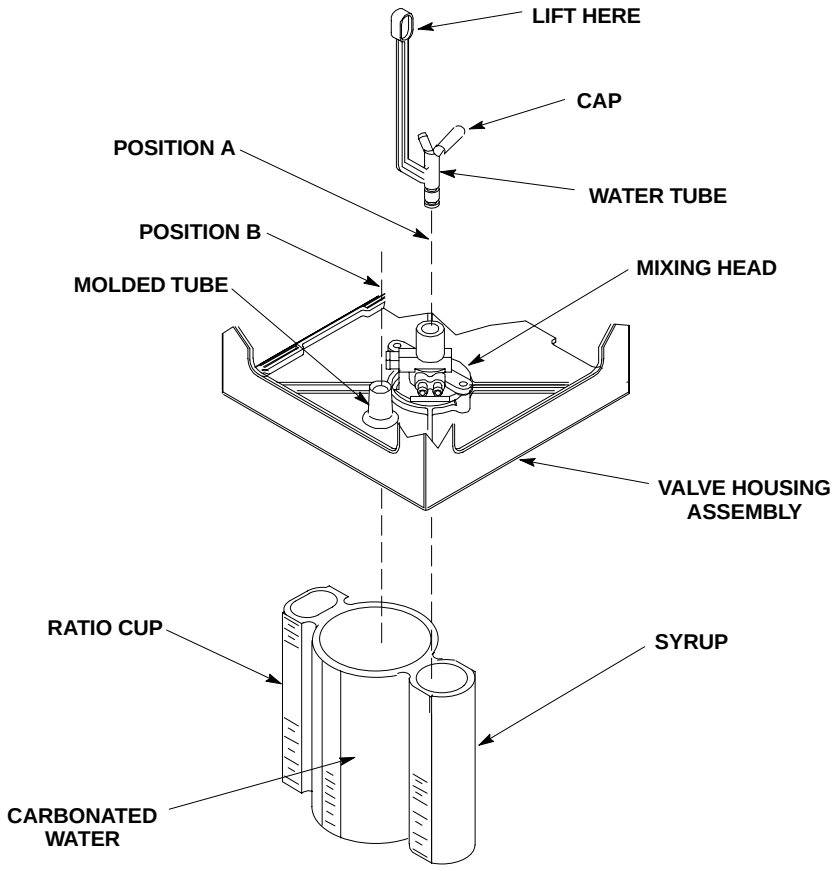


FIGURE 12. RATIO MEASUREMENT DETAIL

OPERATORS INSTRUCTIONS

This section describes the Unit's operating controls, and daily pre–operation checks and maintenance procedures to be performed on the Unit and system by the operator.

WARNING: Disconnect electrical power to Unit to prevent personal injury before attempting any internal maintenance. Only qualified personnel should service internal components of this Unit.

CAUTION: Protect the Unit from freezing conditions. Water freezing in the system will cause serious damage. Maintenance personnel can drain the system if freezing conditions are expected.

WARNING: CO_2 Displaces Oxygen. Strict Attention must be observed in the prevention of CO_2 (carbon dioxide) gas leaks in the entire CO_2 and soft drink system. If a CO_2 gas leak is suspected, particularly in a small area, immediately ventilate the contaminated area before attempting to repair the leak. Personnel exposed to high concentration of CO_2 gas will experience tremors which are followed rapidly by loss of consciousness and suffocation.

PRODUCT DISPENSE SWITCH OPERATION

CARBONATED DRINK

To dispense a carbonated drink, place a cup under the dispensing nozzle and press the desired dispense switch, holding it pressed until cup is filled.

SODA (CARBONATED WATER)

To dispense soda (carbonated water), place a cup under the dispensing nozzle and press S (soda) dispense switch, holding it pressed until cup is filled.

PLAIN WATER (PLAIN WATER KIT INSTALLED)

To dispense plain water, place a cup under the dispensing nozzle and press W (water) dispense switch, holding it pressed until cup is filled.

DAILY PRE–OPERATION CHECK

Each day, before dispensing products, the operator should check the CO_2 pressure in the connected cylinder, check that there is sufficient syrup, wash the Unit nozzle, the cup rest, and the drip tray. Instructions to accomplish each task follow.

CHANGE CO_2 CYLINDER

When the CO_2 cylinder pressure drops, causing the cylinder pressure gage pointer to indicate in the change CO_2 cylinder area, the CO_2 cylinder must be changed (see Figures 7 and 8). To change the cylinder, proceed as follows:

1. Turn cylinder shut off valve clockwise until it seats firmly.
2. Using a wrench, slowly loosen the coupling nut (allow trapped gas to escape).

CAUTION: When the coupling is separated, be sure that the gasket remains inside the coupling nut.

3. Support the regulator and gages and continue to turn the coupling nut until regulator and nut separate from the tank fitting.
4. Look inside the coupling nut to be sure that the gasket remains inside.

WARNING: Always secure the CO_2 cylinder with a safety chain to prevent it from falling over. A broken valve may allow the cylinder to act as a projectile, causing serious injury or property damage.

5. Install cover on empty cylinder.
6. Unchain the empty CO_2 cylinder and carefully set it aside.
7. Secure the full cylinder with the chain, and remove cover from cylinder.
8. Install regulator on a full CO_2 cylinder using the coupling nut. Be sure that the gasket remains inside. Tighten using a wrench.
9. Open cylinder shutoff valve. Listen for leakage and observe both gages. If a leak is heard, close cylinder shutoff valve, tighten the coupling nut, then open the cylinder valve.

CHANGE SYRUP TANK

A syrup tank should be changed when gas is dispensed through the nozzle and no syrup is dispensed. Fittings on the tanks and mating fittings on the ends of the CO_2 and syrup lines are of the “quick disconnect type”, which close off gas and liquid flow when disconnected (see Figures 13 and 14). To change a syrup tank, proceed as follows:

1. At the tank, press down on the collar of the syrup line–end fitting while turning it counterclockwise to release it.

2. Press down on the collar of the CO_2 line end–fitting while turning it counterclockwise to release it.

3. Move the empty tank aside and place a full tank in position.

4. Remove protective caps from the syrup (3 pin) and the CO_2 (2 pin) connectors on the syrup tank.

5. Dip tank connectors in warm water to clean them.

6. Place collar of syrup line end–fitting over the 3 pin connector on the syrup tank, press down on the collar and turn it clockwise to lock.

7. Place collar of CO_2 line end–fitting over the 2 pin connector on the syrup tank, press down on the collar and turn it clockwise to lock.

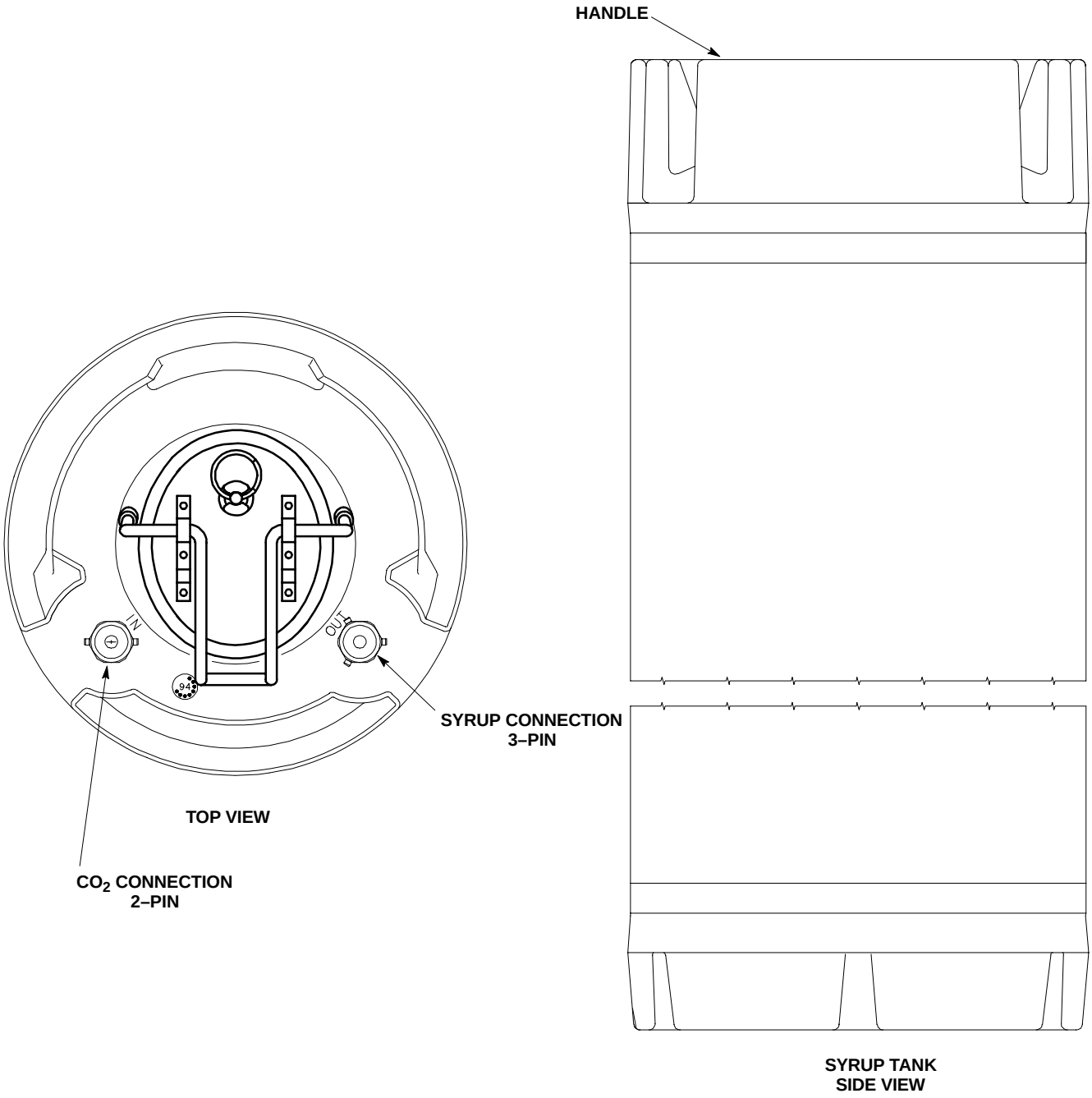


FIGURE 13. SYRUP TANK

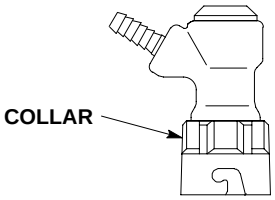
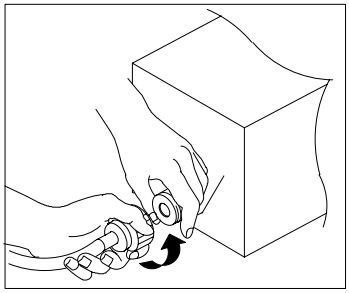


FIGURE 14. LINE END FITTING FOR SYRUP TANK CONNECTION

BAG–IN–BOX SYRUP CONTAINER

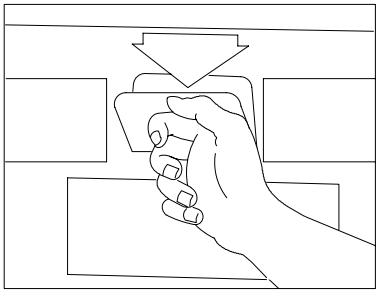
Change a Bag–in–Box syrup container when no syrup is dispensed. The amount of syrup remaining in a bag–in–box container can be estimated by lifting the container. A full 5 gallon (19 liters) container weighs approximately 1/2 lb. (0.23 Kg). To change a container, proceed as follows:

WARNING: Use CO_2 operated pumps only in a well ventilated area.

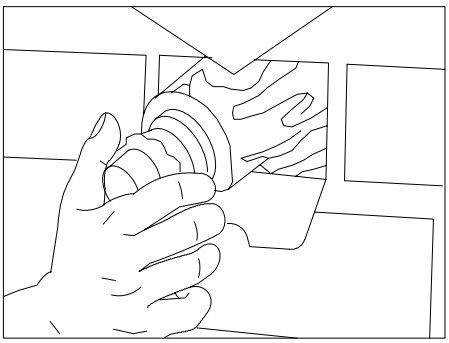


1. At the bag–in–box container, unscrew the red line–end connector from the bag connector of the empty box. The line end connector is of the quick–disconnect type which eliminates syrup flow from the line.

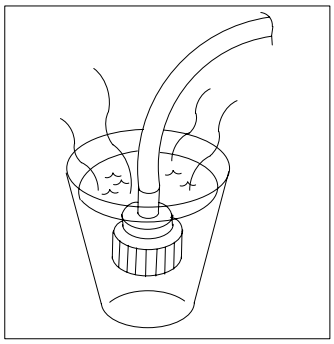
CAUTION: Do not puncture box or internal bag



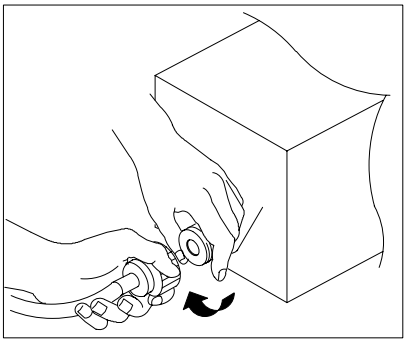
2. Open the flap on a new box by rapping sharply with palm of hand. Do not use a sharp instrument to open.



3. Pull the bag connector from the box; unscrew and remove the dust cap.

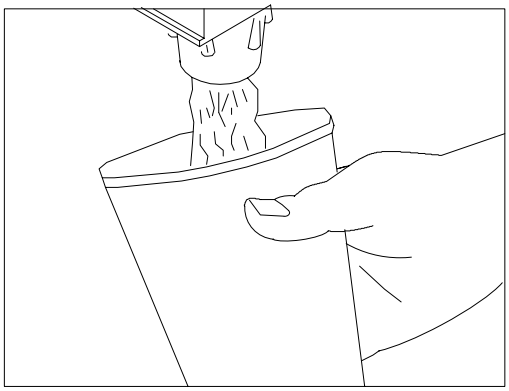


4. Dip the red syrup line–end connector in warm water to clean it.



5. While holding the bag connector, screw the red syrup line end–connector onto the bag connector. Turn the end–connector clockwise until it is fully seated (about 4–1/2 turns).

NOTE: The bag–in–box container, once connected, can be placed in any convenient position.



6. At the dispenser, draw product until a good flow of syrup is obtained.

WASH NOZZLE

NOTE: Do not use detergent as it may cause foaming and give the product an off–flavor.

1. Remove the nozzle from the Unit by turning it 1/8 turn counterclockwise.
2. Wash the nozzle in warm water (no detergent) and dry it.
3. Reinstall the nozzle on the Unit with a clockwise turn.

WASH CUP REST AND DRIP TRAY

1. Lift the cup rest and drip tray from the Unit.
2. Empty drip tray.
3. Wash both cup rest and drip tray using a mild detergent.
4. Dry both items and reinstall on Unit.

CLEAN UNIT EXTERIOR

Clean the Unit exterior using a cloth with mild detergent. Rinse with cloth moistened in plain water. Do not use harsh abrasives.

SERVICE AND MAINTENANCE

APPLICABLE CAUTIONS AND NOTES

WARNING: Wear protective eye wear to avoid injury from gas–driven particles.

CAUTION: Before shipping, storing, or relocating this Unit, the syrup systems *must* be sanitized and all sanitizing solution *must* be purged from the syrup systems. All water *must* also be purged from the plain and carbonated water systems. A freezing ambient environment will cause residual water in the Unit to freeze resulting in damage to internal components.

Refer to Addendum B for sanitizing instructions (US).

CAUTION: In cold weather, Unit must be protected from freezing. Water freezing in the system will expand, causing damage to internal components.

NOTE: The water pump is equipped with a timer which will allow it to run continuously a maximum of five minutes, after which the motor will stop. The timer can be reset by momentarily removing electrical power to the Unit.

NOTE: If a "gurgle'' is heard from the Unit, it indicates a low water level in the water tank. To add water, proceed as follows:

1. Disconnect electrical power from the Unit.
2. Remove screw in top of large cover and remove cover.
3. Add water as described in Section II under the heading, "Filling Tank and Starting Refrigeration System''.
4. Replace large cover and screw.
5. Apply electrical power to the Unit.

MAINTENANCE SCHEDULE

The following maintenance schedule lists items to be performed by either an operator or a qualified maintenance technician in order to keep the system in good operating condition.

RESPONSIBILITY KEY:

O – Operator
M – Maintenance Technician

DAILY

O – Empty drip tray, wash drip tray, cup rest, and nozzle

O – Clean exterior of Unit

O – Change CO_2 cylinder if required

O – Change syrup tank or bag–in–box syrup container if required

WEEKLY

O – Taste each product for off–taste

MONTHLY

M – Check syrup–to–water ratio

SIX MONTHS

M – Sanitize system

YEARLY

M – Lift out refrigeration system and clean condenser and coils

M – Clean and fill water tank

M – Inspect liquid and CO_2 check valves and replace ball seats

WHEN OCCURRING

M – Adjust CO_2 pressure

M – Sanitize for flavor change

M – Add water to water tank if "gurgle" is heard

M – Relocate or ship Unit to new location

M – Inspect liquid check valve after any water disruption (plumbing work, earthquake, etc.)

CHECK SYRUP–TO–WATER

The syrup–to–water ratio should be checked monthly. The procedure is given in Installation section.

SANITIZE SYSTEM

The system must be sanitized at six month intervals, when changing flavors, or if Units is to be relocated. The procedure is given in Addendum B.

NOTE: Detergent solution must not be introduced into the carbonator.

CLEAN REFRIGERATION SYSTEM

The refrigeration system and the water tank should be cleaned each year. Effort involves disconnecting electrical connections, removing screws and lifting the refrigeration system clear of the Unit, exposing the condenser and the water tank.

To clean, proceed as follows:

1. Disconnect electrical power from the Unit, and allow ice bank to partially melt.
2. Remove small (tower) cover from Unit.
3. Remove one screw from large cover and remove cover.
4. Within Unit, disconnect refrigeration power cord from main power cord by separating connector.
5. Disconnect carbonator tank level control probe electrical connector from standing connector on the control box in right rear corner of Unit.
6. Disconnect carbonator water pump power connector from standing connector on the transformer.
7. Disconnect dispensing switch module 24VAC power connector from standing connector on the transformer.
8. Using a magnetic screwdriver, remove three screws from the refrigeration Unit platform. Two screws are along the left side and a third is centered along the right side of the platform.

NOTE: When removed, the lift–out refrigeration system should be rested on its cooling coils.

NOTE: If refrigeration system does not easily lift out, wait 15–20 minutes for ice to melt. Do not force.

9. Using the plastic refrigeration deck handle, lift the refrigeration assembly from the Unit and place it on a flat surface in a basin, resting it on its bottom coils. Note that a partial ice bank will remain on coils.
10. Allow ice bank to melt from the cooling coils. Hot water may be used to hasten this operation.
11. Clean the condenser coil using a hand vacuum cleaner and a soft brush. Low pressure air may be used. Be careful of the cooling fins.

CAUTION: Do Not use any sharp object to remove ice from cooling coils. A puncture will permanently disable the refrigeration assembly

12. Use a fiber brush and water to carefully clean mineral deposits from cooling coils and agitator motor shaft.
13. Place a 5–gallon (19 liter) container under the plugged water tank drain line.
14. Remove the plug from the water tank drain line, and drain water into the container.
15. Wash inside of water tank with plain water and wipe dry with a lint-less cloth.
16. Using the plastic refrigeration deck handle, carefully lower the lift out refrigeration system into place in the Unit.
17. Using a magnetic screwdriver, install three screws in the platform to fasten the system to the Unit.
18. Connect dispensing switch module 24VAC power connector to standing connector on the transformer.
19. Connect carbonator water pump power connector to the standing connector on the control box.
20. Connect carbonator tank level control probe electrical connector to the standing connector on the control box.
21. Within the Unit, connect refrigeration assembly electrical power cord to connector of main power cord.
22. Place small cover on Unit.
23. Install plug in the end of the water tank drain line.
24. Using a funnel, fill the water tank with approximately 4–1/2 gallons of water (17 liters) until water flows out of the tank overflow tube into the drip tray.
25. Place large cover on the Unit and secure it with the removed screw.
26. Connect the Unit to electrical power. Compressor, condenser fan motor and agitator motor will start, and an ice bank will form in the water tank. As the ice bank forms, excess water runs out through the overflow tube into the drip tray.

DUAL LIQUID CHECK VALVE ASSEMBLY MAINTENANCE

WARNING: The dual liquid check valve assembly must be inspected and serviced at least once a year under normal circumstances, and after any water service disruption as may be caused by plumbing work or earthquake which might cause erratic flow of water through the system. A defective valve could allow CO_2 gas to back-flow into the water system and create a health hazard.

WARNING: Wear protective eye wear to avoid injury from gas–driven particles.

The dual liquid check valve assembly requires yearly maintenance, and an internal inspection following disruption of water service. Perform servicing as follows:

1. Disconnect electrical power from the Unit.
2. At CO_2 cylinder, close the cylinder shut off valve.
3. At the plain water inlet to the Unit, shut off the water.
4. Remove one screw from the large cover, and remove the cover from the Unit.
5. At the carbonator, pull up on the relief valve ring to release CO_2.
6. At the top of the dual check valve (see Figure 15) use two wrenches to disconnect the inlet water line from the assembly.
7. Remove foam insulating tube from the dual check valve.
8. Using a wrench on the retainer (see Figure 16) closest to the carbonator tank, loosen and remove the dual check valve assembly from the welded–in carbonator fitting.

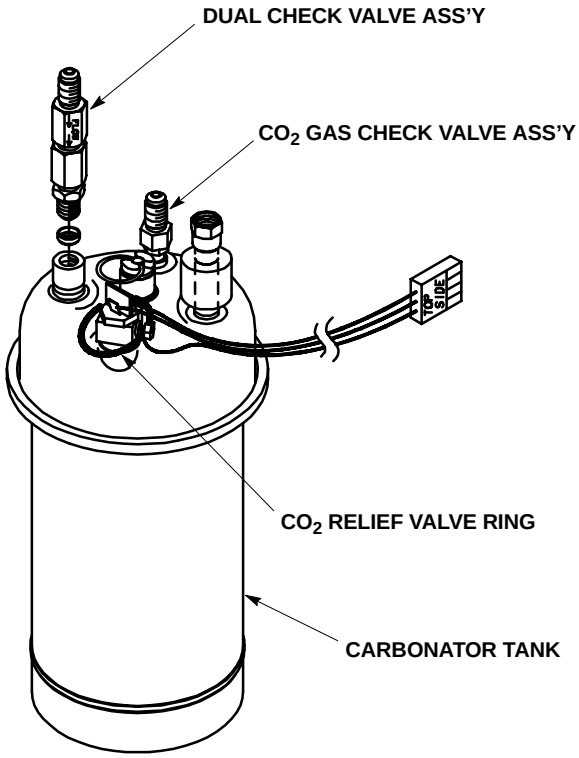


FIGURE 15. CARBONATOR

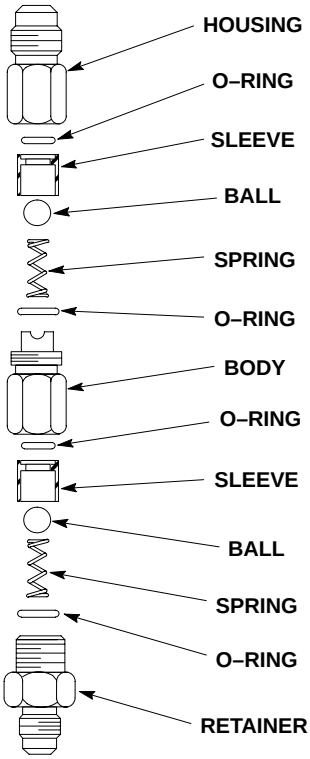


FIGURE 16. DUAL LIQUID CHECK VALVE ASSEMBLY

9. Disassemble each check valve as shown in Figure 16.

10. Wipe each part with clean lint–free cloth.

11. Using a hand lens, inspect each part for burrs, nicks, corrosion, or other indications of deterioration.

IMPORTANT NOTE: Replace ball seat at each servicing.

12. Replace damaged parts and ball seat.

13. Reassemble each check valve.

14. CAUTION: In joining the two check valves together and in making installation on the carbonator, do not overtighten, use torque wrench to avoid damage to plastic seals.

15. Assemble check valves together. Tighten to 35 lb–in (3.95 newton–mtr). Do not overtighten.

16. Install the dual check valve on the carbonator tank, tightening to 35 lb–in.

17. Install foam insulating tube over the check valve assembly.

18. Using two wrenches, connect the inlet water line to the top of the check valve assembly.

19. At the CO_2 cylinder, open the cylinder shut off valve.

20. At the plain water inlet to the Unit, turn on the water.

21. At the carbonator, pull up on the CO_2 relief valve ring to purge air from the carbonator.

22. Apply electrical power to the Unit.

23. Place a cup under the nozzle, then cycle the carbonator by pressing the soda selector.

24. Check product for carbonation, check connections for water or gas leaks.

25. Place large cover on the Unit and secure it with a screw.

CO_2 GAS CHECK VALVE ASSEMBLY MAINTENANCE

WARNING: The CO_2 gas check valve assembly must be internally inspected and serviced at least once each year under normal conditions.

WARNING: Wear protective eye wear to avoid injury from gas–driven particles.

The CO_2 check valve, located on the top of the carbonator (see Figure 15), must be internally inspected at least once a year, and any defective parts replaced. The ball seat (quad ring) must be replaced at each servicing. Note that the valve body (see Figure 15) is welded to the carbonator tank. To service the CO_2 gas check valve assembly, proceed as follows:

1. Disconnect electrical power from the Unit.

2. At CO_2 cylinder, close the cylinder shut off valve.

3. At the plain water inlet to the Unit, shut off the water.

4. Remove one screw from the large cover and remove the cover from the Unit.

5. At the carbonator, pull up on the relief valve to release CO_2.

6. Using two wrenches, disconnect the CO_2 inlet line from the top of the gas check valve assembly.

NOTE: Ball seat will remain in the body when the housing is removed.

7. Carefully remove the housing from the top of the welded–in body.

8. Using a pencil point, remove the the ball seat (quad ring) from the body.

9. Remove the ball, spring, and retainer from the body.

10. Wipe each part with clean lint–free cloth.

11. Using a hand lens, inspect each part for burrs, nicks, corrosion, or other indications of deterioration.

IMPORTANT NOTE: Replace ball seat (quad ring) Part Number 183294 at each servicing.

12. Replace damaged parts and ball seat (quad ring).

13. Reassemble CO_2 gas check valve as follows:

    A. Place the spring over the retainer, and drop the two into the valve body.

    B. Balance the ball atop the spring.

    C. Using a new ball seat (quad ring) Part No. 183294, assemble the spring, ball and the ball seat into the body.

14. Screw the Housing over the body and tighten to 35 lb–in (3.95 newton–mtr).

15. Using two wrenches, connect the CO_2 line to the top of the CO_2 gas check valve assembly.

16. At the CO_2 cylinder, open the cylinder shut off valve.

17. At the plain water inlet to the Unit, turn on the water.

18. AT the carbonator, pull up on the CO_2 relief valve ring to purge air from the carbonator.

19. Apply electrical power to the Unit.

20. Place a cup under the nozzle, then cycle the carbonator by pressing the soda selector.

21. Check product for carbonation, check connections for water or gas leaks.

22. Replace large cover and secure it with one screw.

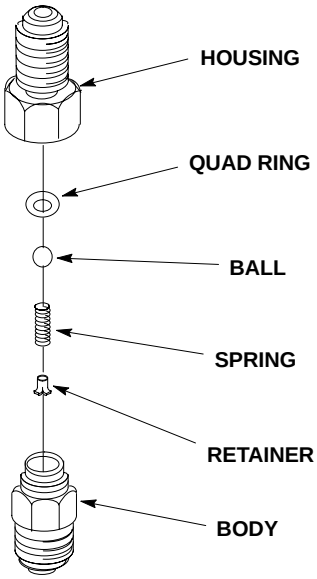


FIGURE 17. CO_2 CHECK VALVE ASSEMBLY

TROUBLESHOOTING

GENERAL INFORMATION

General information consists of applicable warnings and notes of direct concern to the repair person, followed by the Unit electrical diagram, and instructions for crimping tube clamps.

APPLICABLE WARNINGS AND NOTES

WARNING: Disconnect electrical power from the Unit before removing the large cover to prevent personal injury.

WARNING: Wear protective eyewear to avoid injury from gas–driven particles.

WARNING: Internal components of the Unit are to serviced only by trained personnel.

NOTE: If repairs are to be made to the carbonated water system, perform the following steps:

1. Disconnect electrical power from the Unit.
2. At the CO_2 cylinder, turn the shut off valve fully clockwise to turn off gas.
3. At Unit, remove screw and remove large cover.
4. At the carbonator tank, lift ring to open valve and bleed off CO_2.

NOTE: If repairs are to be made to the syrup system of a bag–in–box Unit, perform the following steps:

1. Disconnect electrical power from the Unit.
2. At the CO_2 cylinder, turn the shut off valve fully clockwise to turn off gas.
3. At the Unit, draw soda from the dispenser. Check the line pressure gage for zero pressure indication.
4. Draw syrup from the dispenser to bleed off syrup pressure.

NOTE: If repairs are to be made to the syrup system of a syrup tank system, perform the following steps:

1. Disconnect electrical power from the Unit.
2. At the CO_2 cylinder, turn the shut off valve clockwise to turn off gas.
3. At the CO_2 regulator, use two wrenches to “crack” the outlet fitting of the regulator to relieve gas pressure. Check the regulator pressure gage for zero pressure indication.

An alternate method is as follows:

A. Disconnect syrup lines from the syrup tank.

B. At the Unit, draw syrup from the dispenser to bleed off syrup pressure.

UNIT ELECTRICAL DIAGRAM

(see Figure 19).

NOTE: The printed circuit board can be removed from the control box as follows:

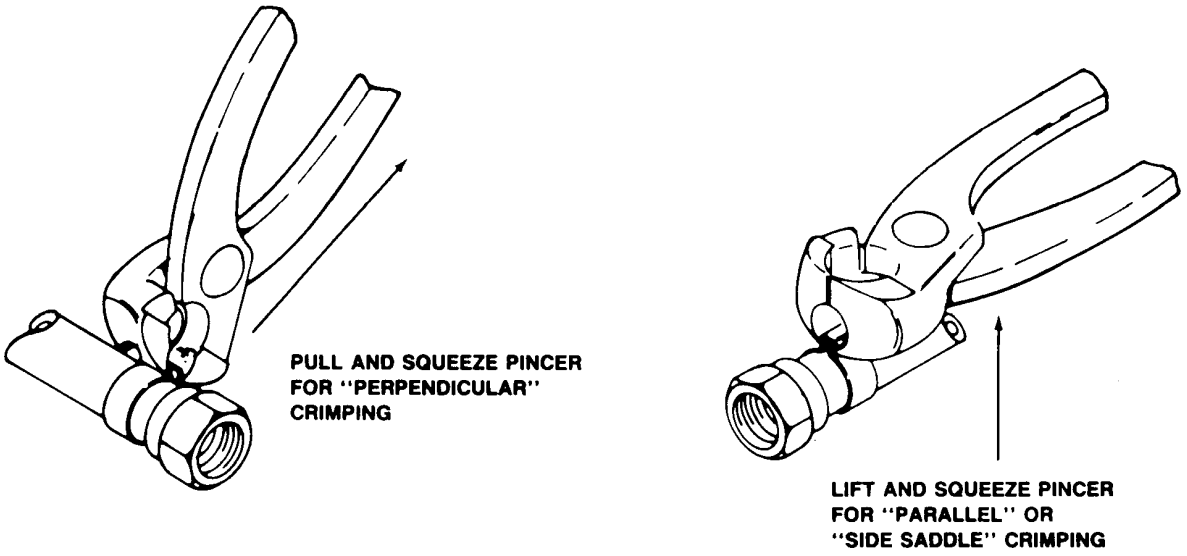
1. Release and remove the cover.
2. Insert a small screwdriver into the oval hole in the top of the printed circuit board, and rest the screwdriver shank on the top inside edge of the control box and gently lever the board upward from its contacts.

Instructions for Crimping Tube Clamps

(see Figure 18).

Troubleshooting Table

Table 5–1 lists the most common problems, possible causes, and remedies.



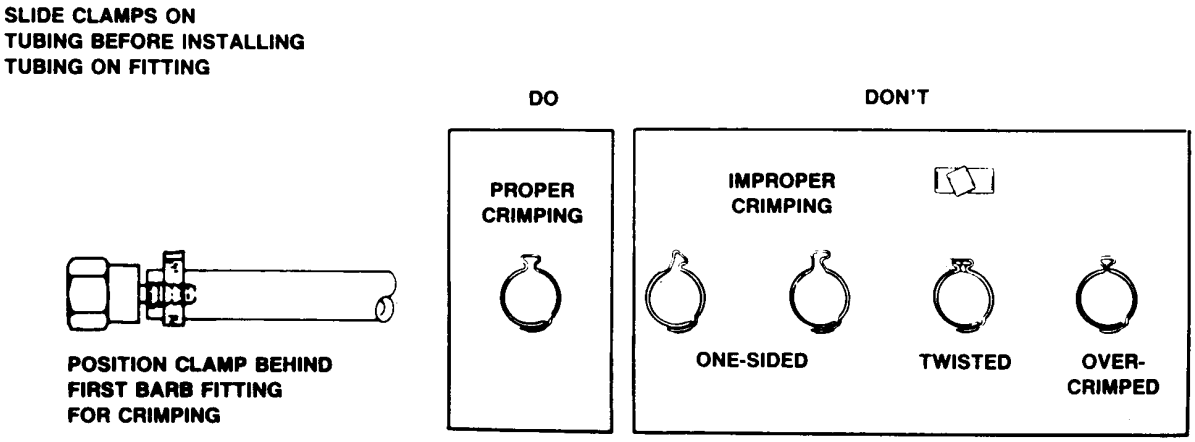


FIGURE 18. INSTRUCTIONS FOR CRIMPING TUBE CLAMPS

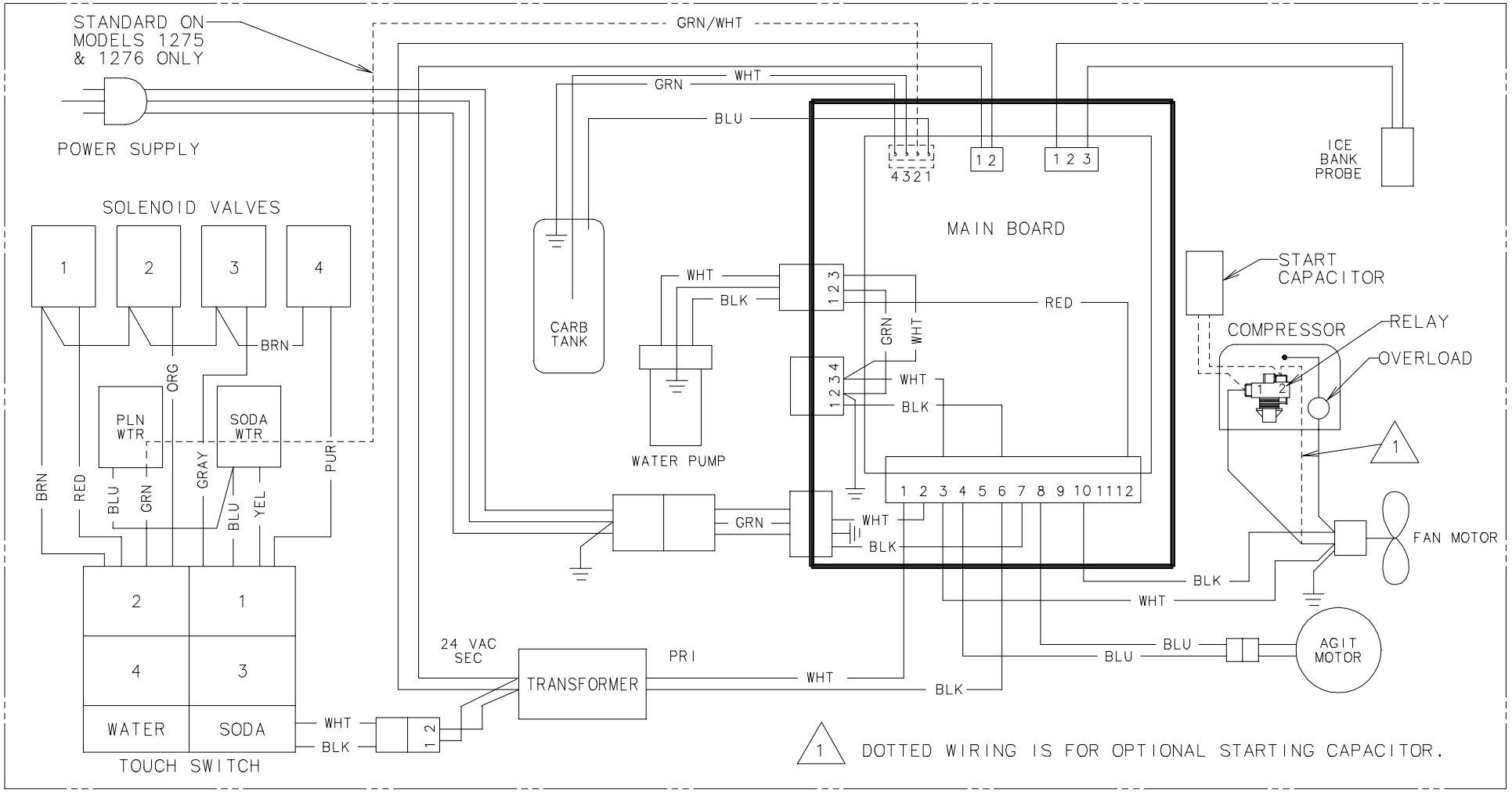


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FIGURE 19. UNIT ELECTRICAL DIAGRAM

TROUBLESHOOTING

IMPORTANT: Only qualified personnel should service internal components or electrical wiring.

WARNING: If repairs are to be made to carbonated water system, disconnect electrical power to Cooling Unit, shut off plain water and CO_2 supplies, and relieve the carbonated water system pressure before proceeding. If repairs are to be made to syrup system, remove quick disconnects from applicable syrup tank, then relieve the system pressure before proceeding. If repairs are to be made to CO_2 system, stop dispensing, shut off CO_2 supply, then relieve the system pressure before proceeding.
If repairs are to be made to an existing Remote Condensing unit, disconnect the power to the condensing unit before proceeding

Trouble		Probable Cause		Remedy
WATER–TO–SYRUP RATIO IS INCORRECT	A.	Syrup regulator not properly adjusted.	A.	Adjust ratio. Refer to Installation Section.
	B.	Tank system: CO_2 pressure to tank low.	B.	Adjust CO_2 pressure. Refer to Operators Section.
	C.	No syrup supply.	C.	Replenish syrup supply.
	D.	Syrup tank, or BIB syrup connections not tight.	D.	Check connections at syrup supply.
	E.	Dispensing valve, flow regulator, tank, or BIB connections restricted.	E.	Sanitize system. Refer to Addendum B.
	F.	Dirty or inoperative syrup flow regulator.	F.	Disassemble and clean. Do not intermix parts.
CARBONATION TOO LOW IN DISPENSED PRODUCT	A.	Cylinder CO_2 pressure regulator out of adjustment.	A.	Adjust cylinder CO_2 pressure regulator.
	B.	CO_2 cylinder is low or empty.	B.	Replace CO_2 cylinder.
	C.	Air in carbonator tank.	C.	At Unit carbonator, lift relief valve to vent air.
	D.	Water, oil, or dirt in CO_2 supply.	D.	Remove contaminated CO_2 cylinder. Flush CO_2 lines. Install a new CO_2 cylinder and blow contaminants out of regulator(s).
DISPENSED PRODUCT IS CLEAR BUT FOAMS IN CUP OR GLASS	A.	Oil film or soap residue in cup or glass.	A.	Rinse cups and glasses well after washing.
DISPENSED PRODUCT FOAMS AS IT LEAVES NOZZLE.	A.	Capacity of refrigeration system is exceeded.	A.	Allow time for ice bank to re–form. Ice bank depleted.
	B.	CO_2 regulator pressure too high.	B.	At CO_2 cylinder, reduce regulator pressure. If diet product, install diet secondary regulator.

Trouble	Probable Cause	Remedy
	C. In syrup tank Unit, syrup is over–carbonated as indicated by bubbles	C. At syrup tanks, remove CO_2 and syrup connections. Depress tank gas valve in syrup line to Unit. to relieve pressure. Shake tank vigorously and depress tank gas valve. Repeat as required to remove excess carbonation.
	D. Dispensing valve is restricted or dirty.	D. 4A. Clean nozzle. 4B. Sanitize system. Refer to Addendum B.
	E. Dirty water supply.	E. Flush Unit water lines and Unit carbonator. It may be necessary to disconnect lines to carbonator tank, remove, invert and flush tank. Install water filter or replace cartridge in existing filter.
NO PRODUCT DISPENSED	A. No electrical power to Unit.	A. Apply electrical power.
	B. Disconnected wire at dispensing valve.	B. Turn off electrical power and repair.
	C. Unit is frozen.	C. Disconnect electrical power cord and allow Unit to thaw.
	D. Selector circuit board not connected to power.	D. Connect circuit board to 24V transformer.
	E. Transformer is burned out.	E. Check transformer and replace if necessary.
ONLY CARBONATED WATER IS DISPENSED	A. Connections to syrup tanks or BIB loose.	A. Check connections to syrup supply.
	B. No syrup.	B. Replenish syrup supply.
	C. Syrup tank CO_2 regulator out of adjustment.	C. Adjust syrup tank CO_2 regulator.
	D. Inoperable dispensing valve.	D. Repair or replace dispensing valve.
	E. Syrup flow regulator out of adjustment.	E. Adjust water–to–syrup ratio. Refer to installation Section.
	F. Lines restricted to syrup flow regulator.	F. Check lines for sharp kinks. Sanitize syrup system, Refer to Addendum B.
CARBONATOR TANK NOT FILLING PROPERLY	A. No water supply.	A. Check water supply to Unit.
	B. Water pump on safety cutout.	B. Reset water pump safety cutout by momentarily unplugging electrical power from the Unit.
	C. Faulty carbonator probe.	C. Check probe plug on electrical control box.
	D. Pump is worn out.	D. Replace pump and motor

Trouble	Probable Cause	Remedy
FREQUENT SHORT FILL CYCLES OF CARBONATOR TANK	A. Probe terminal disconnected or loose.	A. Check and tighten all electrical connections to probe.
	B. Probe incorrectly wired.	B. Verify correct wiring using wiring diagram.
	C. Faulty probe.	C. Replace probe.
	D. Faulty logic circuit board.	D. Replace logic circuit board.
ONLY SYRUP IS DISPENSED	A. Water supply is turned off.	A. Open water supply valve.
	B. At Unit, carbonator motor is disconnected.	B. Check that carbonator motor is receiving power.
	C. Water pump safety system has removed power to the pump.	C. Unplug electrical power to Unit momentarily.
	D. Unit is frozen.	D. Disconnect electrical power cord and allow Unit to thaw.
COMPRESSOR DOES NOT OPERATE	A. Ice bank is sufficient.	A. Refrigeration not called for.
	B. No power to Unit.	B. Check power into Unit and into compressor.
	C. Compressor overloaded.	C. Check condenser for cleanliness. Compressor should start after two minutes.
	D. Line voltage too low.	D. Measure line voltage. Line voltage must be at least 90 percent of rated voltage (103 VAC or 198 VAC) for compressor to start.
	E. Inoperative ice bank control board.	E. Replace ice bank control board.
	F. Inoperative compressor.	F. Replace compressor.
	G. Ice bank connector loose or not plugged in.	G. Plug in connector on board.
COMPRESSOR DOES NOT STOP AFTER ICE BANK IS FORMED.	A. Ice bank probe or connections may be faulty.	A. Check ice bank probe for proper operation.
COMPRESSOR RUNS CONTINUOUSLY BUT DOES NOT FORM AN ICE BANK.	A. Cooling capacity is exceeded by load.	A. Reduce number of drinks served until ice bank forms.
	B. Unit is located in an excessively hot area, or air circulation through cooling.	B. Relocate Unit or provide additional Check condenser for condenser is restricted. cleanliness, check condenser fan. Remove obstructions from top of Unit.
	C. Check for ice bank at bottom of evaporator in water tank.	C. Ice bank at bottom of evaporator may indicate a refrigeration leak or insufficient charge. (repair/recharge).
	D. Dirty condenser coil.	D. Clean condenser coil.
	E. Condenser fan not functioning.	E. Check fan blade and motor.

Trouble	Probable Cause	Remedy
	F. Agitator motor not running.	F. Check agitator motor, replace if necessary.
CONDENSER FAN NOT OPERATING	A. Fan blade obstructed.	A. Remove obstruction, clean motor.
	B. Loosen set screw.	B. Tighten set screw.
	C. Faulty electrical connection.	C. Repair connections.
	D. Motor inoperative.	D. Replace motor.
AGITATOR MOTOR NOT OPERATING	A. Agitator propeller obstructed.	A. Clear obstruction.
	B. Loose set screw.	B. Tighten set screw.
	C. Faulty electrical connection.	C. Repair connections.
	D. Motor inoperative.	D. Replace motor.
SODA ONLY OF PLAIN WATER ONLY SWITCH DOES NOT OPERATE	A. Jumper on back of touch switch panel is in OFF position.	A. Move jumper to on position.

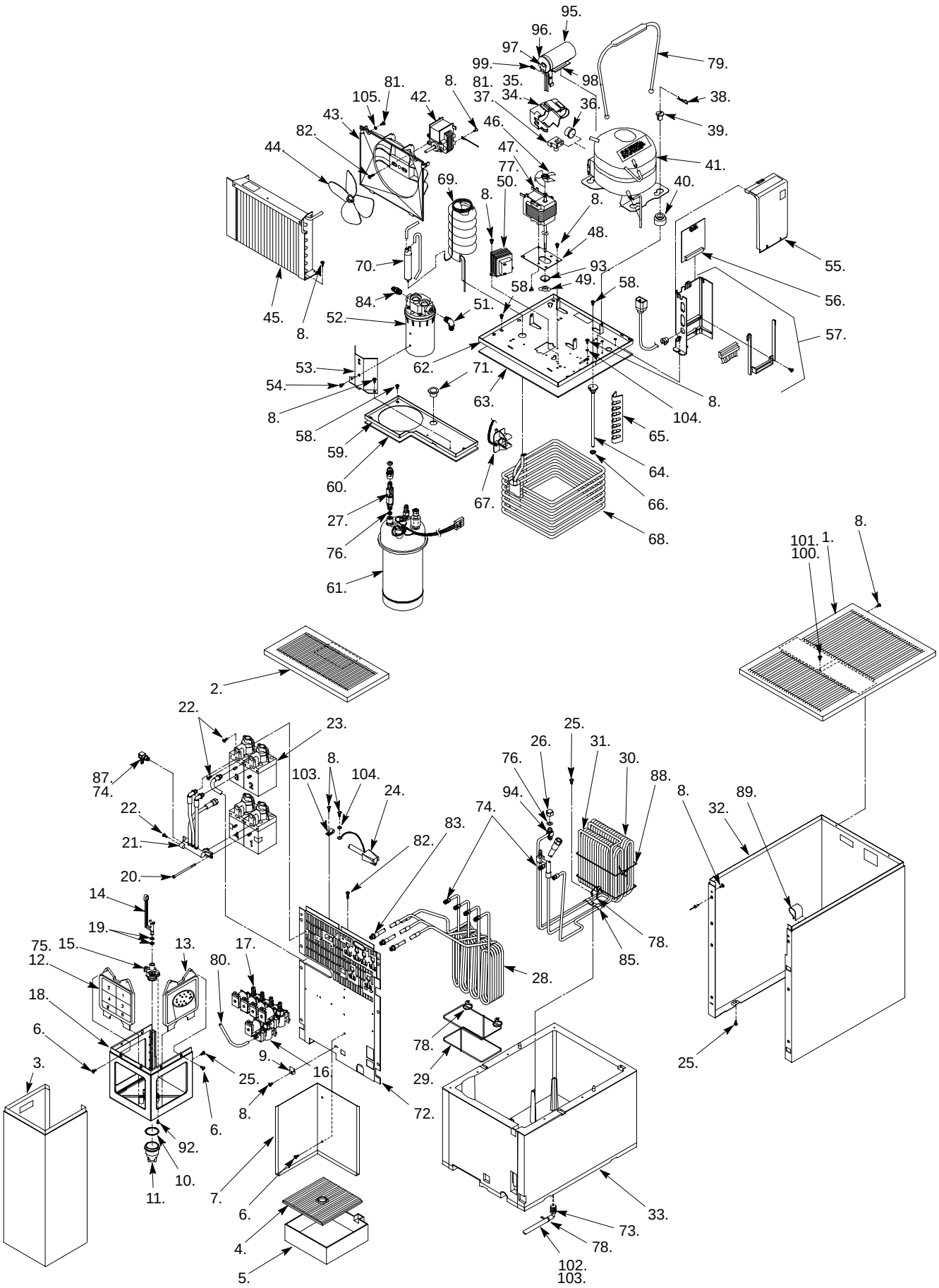
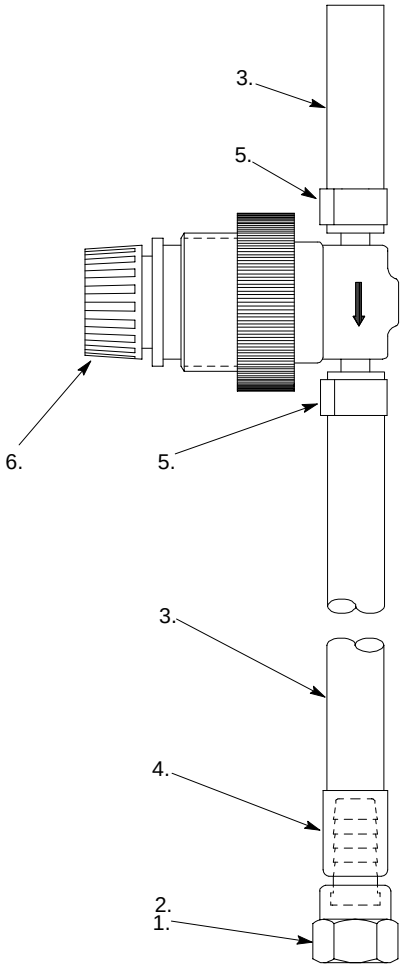


FIGURE 20. CONVERTIBLE PARTS BREAKDOWN

ITEM NO.	PART NO.	DESCRIPTION
	0080	Convertible, 115V 60HZ with Pump
	0088	Convertible, 115V 60HZ without Pump
	1275	Convertible, 115V 60HZ with Pump, USA
	1276	Convertible, 115V 60HZ without Pump, USA
1.	0019	Cover, Larger, Top
2.	0025	Cover, Small, Top
3.	0086	Wrap, Pump
	1180	Wrap, Pump, USA
4.	0071	Rest Cup
5.	0069	Drip Tray
6.	188652	Thread Rolling Screw, SL. Truss Hd., Stainless Steel, No. 8–32 by 3/8” long
7.	0064	Panel, Splash
8.	*310461	Thread Rolling Screw, Phil Pan Hd., No. 8–32 by 3/8” long
9.	0044	Latch, Wrap
10.	150065	O–Ring, 1.051 I.D. by .070 C.S.
11.	0007	Nozzle
12.	0893	Wire Harness
13.	0878	Panel and Decal Ass’y
14.	0011	Fitting, Carb. Water
15.	1178	Body, Valve Mixing Head
16.	0537	Solenoid Valve, Carb. Water (See Page 6–4)
17.	0538	Solenoid Valve, Syrup (See Page 6–4)
18.	0551	Housing, Valve (See Page 6–6)
19.	110677	O–Ring, .176 I.D. by .070 C.S.
20.	*0012	Thread Rolling Screw, Phil Pan Hd., No. 8–32 by 3” long, with Pumps
21.	0548	Manifold Ass’y with Pumps (See Page 6–6)
22.	0550	Screw, Half–Moon, with Pumps
23.	0073	Pump, Syrup, 80–psi, with Pumps
24.	0050	Service Cord
25.	317784	Thread Cutting Screw, Phil Truss Hd., Stainless Steel No. 8–18 by 1/2” long
26.	770452	Cap Nut, Stainless Steel, 7/16–20
27.	774005–020	Dual Check Valve Assembly (See Page 6–4)
28.	0026	Coil, Syrup, Valve No. 1 with Pumps (See Page 6–6)
	0765	Coil, Syrup, Valve No. 1 without Pumps (See Page 6–6)
29.	0067	Retainer, Coil
	1671	Coil Assembly Syrup Without Pumps Valves # 2, 3, & 4 (see Page 6–6)
	1672	Coil Assembly Syrup With Pumps Valves # 2, 3, & 4 (see Page 6–6)
30.	0014	Coil, Plain Water (See Page 6–6)
31.	0027	Coil, Carb. Water (see Page 6–6)
32.	0596	Wrap, Water Bath
	1181	Wrap, Water Bath, USA
33.	0051	Tank, Water (See Page 6–5)
34.	309741	Fastener, Compressor Cover
35.	309742	Cover, Terminal
36.	0049	Overload, Compressor
37.	1447	Relay Capacitor Start Compressors
38.	398034–400	Hitch Pin
39.	317781	Bushing, Split
40.	189723	Grommet
41.	0006	Compressor, 115V, 60Hz
42.	1314	Condenser Fan Motor, 115V, 60Hz, 3.1 Watt
43.	0005	Shroud, Condenser Coil
44.	0013	Fan, 4–Blade, 6.5 inch Dia.
45.	0001	Condenser Coil
46.	0066	Fan, 4–Blade, 2.25 inch Dia.
47.	0016	Agitator Motor, 115V, 8 Watt
48.	0081	Plate, Agitator Motor
49.	0227	Blade, Agitator Motor
50.	314129–009	Transformer, 120V–24V
51.	187485	Fitting, 1/4–MPT by 6/16–20
52.	0008	Pump, 115V, 19–GPH
53.	0039	Bracket, Water Pump
54.	*312251	Thread Rolling Screw, Phil Pan Hd., No. 10–24 by 3/8” long
55.	0041	Cover, Control Box
56.	0077	P.C. Board
57.	0879	Control Box Assembly (See Page 6–7)
58.	*0010	Thread Rolling Screw, Phil Pan Hd., No. 10–14 by 5/8” long
59.	0033	Platform, Carb.
60.	0034	Insulation, Platform, Carb.
61.	0521	Carb. Tank Assembly (See Page 6–5)
62.	1176	Platform, Refrigeration
63.	1175	Insulation, Platform, Refrigeration
64.	0031	Rod, Support, Evaporator
65.	0037	Spacer, Coil
66.	317665	Push–on Nut
67.	1468	Ice Bank Probe Ass’y
68.	1174	Evaporator Coil Assembly (See Page 6–5)
69.	1315	Heat Exchange Assembly
70.	1346	Dryer, Dual
71.	172128	Plug, 3/4
72.	0087	Panel, Bulkhead
73.	317691	Fitting, Plug, 1/4NPT
74.	317015	O–Ring .239 I.D. by .070 C.S.
75.	0065	Switch, Touch
76.	178025–100	Tapered Gasket, White
77.	0099	Wire Harness, 24V
78.	690945	Tie Cable
79.	0124	Handle
80.	0651	Tube, Syrup
81.	*320289	Thread Rolling Screw, Phil Pan Hd., No. 6–32 by 1/4” long
82.	*320240	Thread Rolling Screw, Phil Pan Hd., No. 8–32 by 1/2” long
83.	180025	O–Ring, .364 I.D. by .070 C.S.

ITEM NO.	PART NO.	DESCRIPTION
84.	183061	Fitting, 1/4–NPT by 7/16–20
85.	0520	Retainer, Water Line
86.	0581	Foot (Not Shown)
87.	0570	Fitting, CO Inlet Manifold, with Pump
88.	1077	Coil Retainer
89.	011117	Wire Clip
90.	1280	Tube Ass'y USA (Not Shown)
91.	1331	Tube Ass'y, USA (Not Shown)
92.	186618	Machine Screw, Phil RD HD, Stainless Steel, No. 6–32 By 3/4" Long
93.	393149	Slinger
94.	770605	Fitting, Tee, 7/16–20
95.	1446	Capacitor
96.	197164	End Cap
97.	197383	Capacitor Clip
98.	1448	Mounting Bracket
99.	*1488	Thread Rolling Screw, Fil Phil Hd No. 10–24. By 3/8" Long
100.	151460	Thread Rolling Screw, Phil Pan Hd Stainless Steel, No. 6–32 By 1/2" Long
101.	318036	Push–on Nut, .125 Stud
102.	140117	Drain Tube, .375 I.D. By 24" Long
103.	1734	Clamp, Cable
104.	*343304	Washer, No. 10
105.	*322967	Washer, No. 6



ITEM NO.	PART NO.	DESCRIPTION
	1280	Tube Ass'y, Water Inlet
1.	176017	Swivel Nut, 7/16-20
2.	770104	Nipple, for .265 I.D. tube
3.	1560	Tube, .265 I.D. by 25" Long
4.	176000	Ferrule, for .500 O.D. Tube
5.	300200	Clamp, for .500 O.D. Tube
6.	0569	Regulator, Water Pressure

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FIGURE 21. WATER INLET LINE ASS'Y

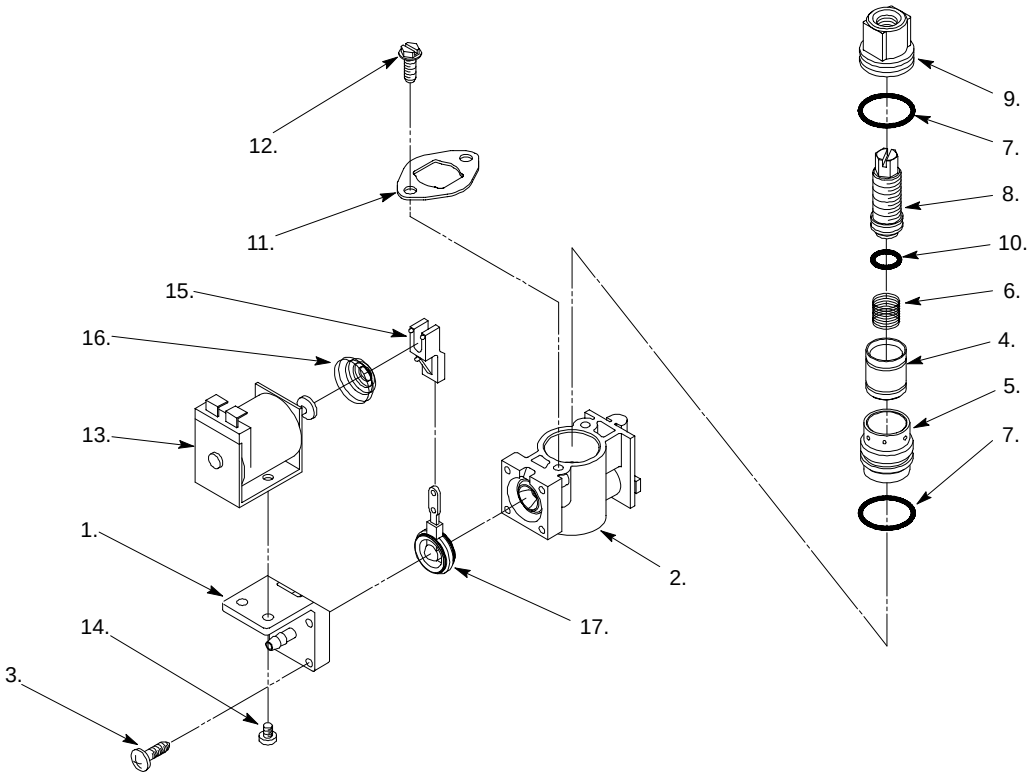


FIGURE 22. SOLENOID VALVE ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION
	0537	Solenoid Valve Assembly, Carb.Water
	0538	Solenoid Valve Assembly, Syrup
1.	1320	Block, Valve
2.	1319	Body Valve
3.	0837	Sheet Metal Screw, Phil Pan Hd., No. 6–20 by 5/8” long
4.	0199	Piston, Syrup (Syrup)
	310754–011	Piston, Water
5.	317431	Cylinder, Flow Control (Syrup)
	317431–011	Cylinder, Flow Control (Water)
6.	310482	Spring
7.	317816	O–Ring, .676 I.D. by .070 C.S.
8.	310632–001	Adjusting Screw
9.	1318	Flow Control, top (Syrup)
10.	180025	O—Ring, .364 I.D. by .070 C.S.
11.	1545	Retainer, Housing
12.	1081	Thread Cutting Screw, SL Hex Hd., Stainless Steel, No. 8–18 by 1/2” long
13.	0024	Solenoid, 24V
14.	*187188	Screw, Phil Pan Hd., No. 8–32 by 1/4” long
15.	317579	Arm, Solenoid
16.	0854	Spring, Conical
17.	311355	Valve Inlet

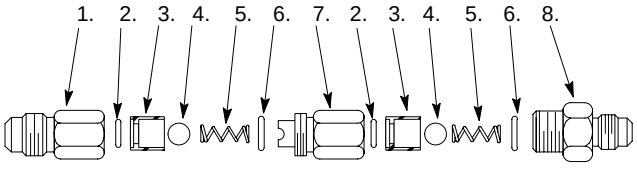
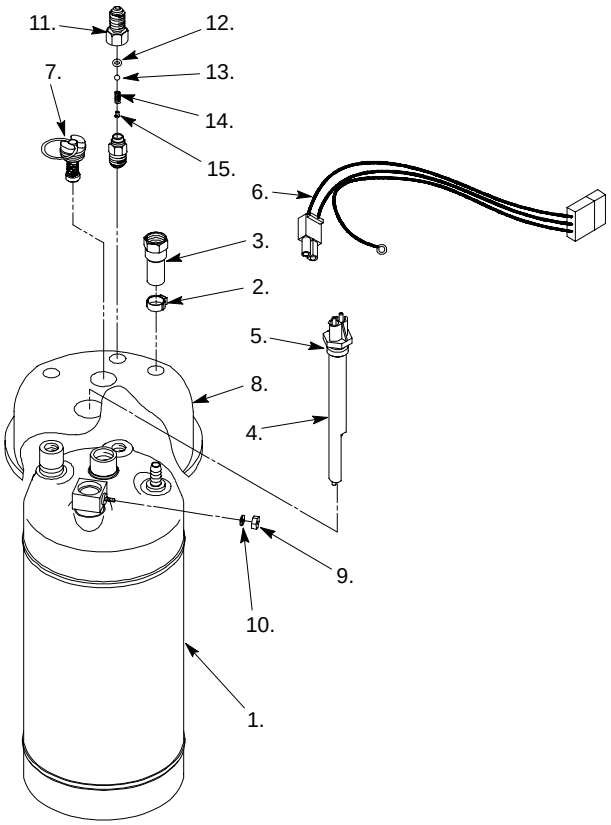


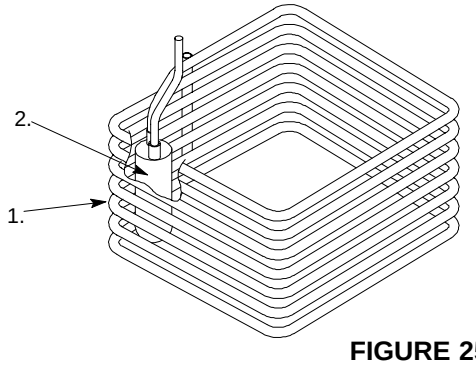
FIGURE 23. DUAL CHECK VALVE ASSEMBLY

ITEM NO.	PART NO.	DESCRIPTION
	774005–020	Dual Check Ass’y
1.	774014	Body
2.	010	O–Ring
3.	774003	Sleeve
4.	302	Ball, .312 Dia.
5.	990139–355	Spring
6.	011	O–Ring
7.	774002	Body
8.	774013	Retainer



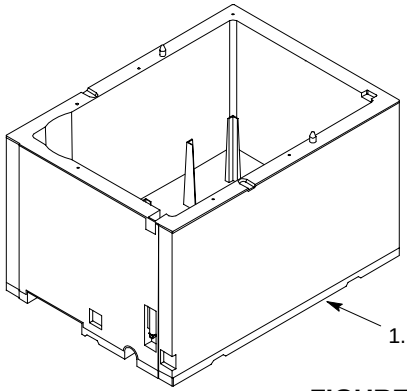
ITEM NO.	PART NO.	DESCRIPTION
	0521	Carb. Tank Assembly
1.	0035	Carb. Tank
2.	312926	Clamp, For .500 O.D. Tube
3.	1559	Tube, .265 I.D. by 2” long
4.	1305	Probe, Level Control
5.	180024	O–Ring, .424 I.D. by .103 C.S.
6.	1658	Wire Harness, Liquid Level
7.	1116	Stem Assembly
8.	0522	Insulation, Carb.
9.	343457	Hex Nut, Stainless Steel, No. 8–32
10.	398031–001	Washer, Stainless Steel No. 8
11.	183309	Adapter
12.	183294	Quad Ring, .145 I.D. by .070 C.S.
13.	183296	Ball, .187 Dia.
14.	183297	Spring
15.	183298	Retainer

FIGURE 24. CARBONATOR TANK ASSEMBLY



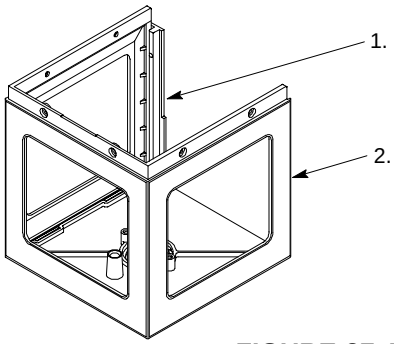
ITEM NO.	PART NO.	DESCRIPTION
	1174	Evaporator Coil Assembly
1.	1177	Evaporator Coil
2.	040132	Accumulator

FIGURE 25. EVAPORATOR COIL ASSEMBLY



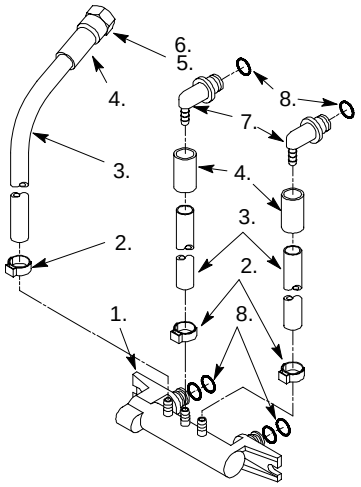
ITEM NO.	PART NO.	DESCRIPTION
	0051	Water Tank Assembly
1.	0052	Tube
	0710	Overflow Elbow

FIGURE 26. WATER TANK ASSEMBLY



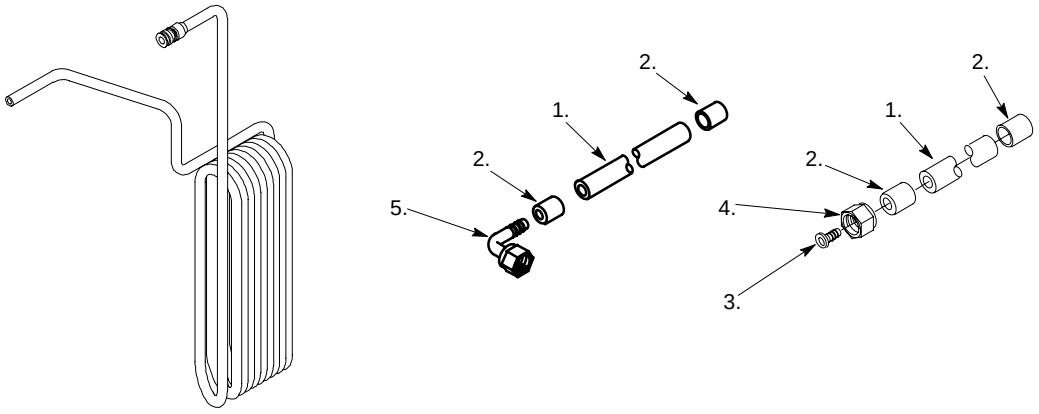
ITEM NO.	PART NO.	DESCRIPTION
	0551	Valve Housing Assembly
1.	0062	Bottom, Housing
2.	0042	Wrap, Housing

FIGURE 27. VALVE HOUSING ASSEMBLY



ITEM NO.	PART NO.	DESCRIPTION
	0548	Manifold Assembly
1.	0070	Body, Manifold
2.	311527	Clamp, For .312 O.D. Tube
3.	174004	Tube, .156 I.D. by 31–1/2” long
4.	176004	Ferrule, 31–Jaw, for .312 O.D. Tube
5.	176017	Swivel Nut, 7/16–20
6.	770106	Nipple, for .156 I.D. Tube
7.	0075	Fitting, Barb, Elbow
8.	317015	O–Ring, .239 I.D. by .070 C.S.

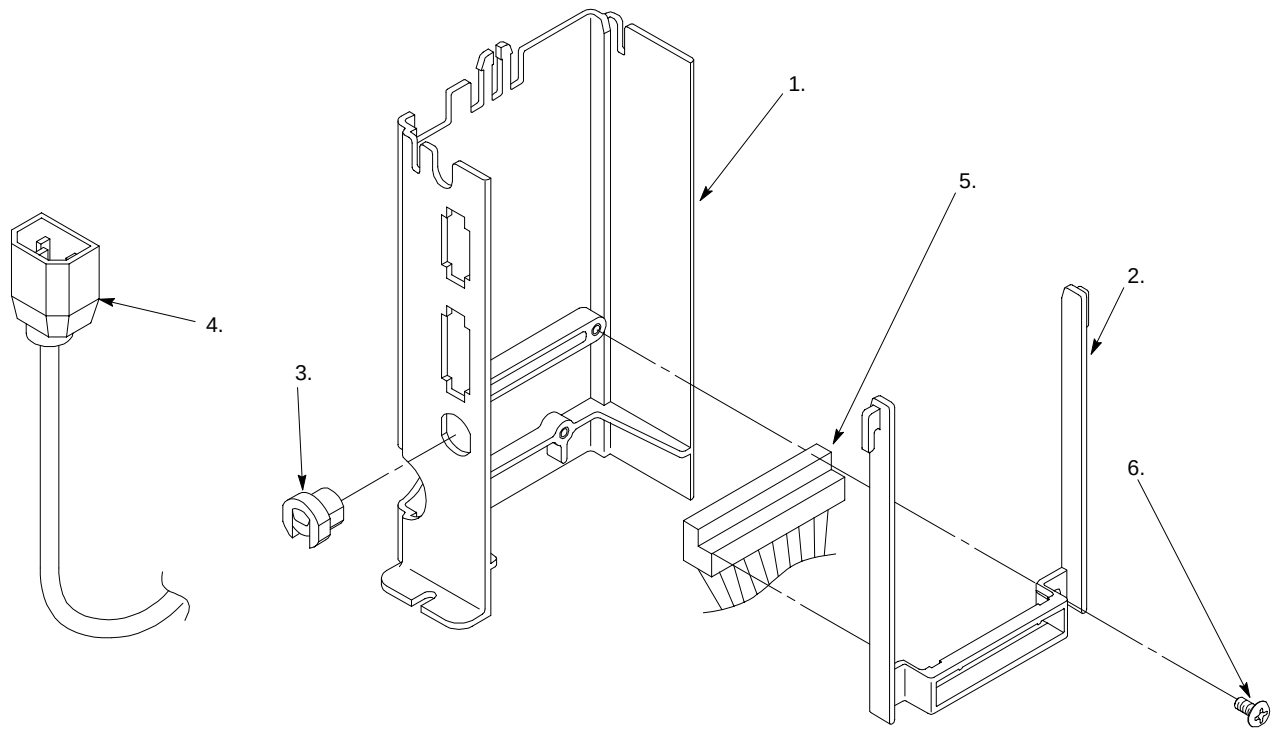
FIGURE 28. MANIFOLD ASSEMBLY



ITEM NO.	PART NO.	DESCRIPTION
	0026	Coil Assembly, Syrup, with Pumps Valve #1
	0765	Coil Assembly, Syrup, without Pumps Valve #1
	1671	Coil Assembly Syrup without Pumps Valves # 2, 3, & 4
	1672	Coil Assembly Syrup with Pumps Valves # 2, 3, & 4
	0014	Coil Assembly, Plain Water

ITEM NO.	PART NO.	DESCRIPTION
	0027	Coil Assembly, Carb Water
1.	**1560	Tube, .265 I.D. by 26” long (Syrup)
2.	176000	Ferrule, 47–Jaw, for .500 O.D. Tube
3.	0074	Fitting, Outlet (Syrup)
	770104	Nipple, for .395 O.D. Tube (Plain Water)
4.	176017	Swivel Nut, 7/16–20, (Plain Water)
5.	770401	Fitting, Elbow, (Plain Water)
6.	180025	O–Ring, .364 I.D. (Syrup with Pumps)

FIGURE 29. COIL ASSEMBLY



ITEM NO.	PART NO.	DESCRIPTION
	0879	Control Box Ass'y
1.	0072	Control Box
2.	0706	Retainer, Board
3.	186564	Strain Relief
4.	0068	Service Cord
5.	1487	Wire Harness
6.	187254	Screw, Phil Truss Hd, No. 6 by 3/8" Long

FIGURE 30. CONTROL BOX ASSEMBLY

ADDENDUM A

SEALING UNIT BASE TO COUNTERTOP (USA)

To comply with the requirements of the NSF International, (NSF), the base of a Unit must be sealed to the countertop and all access holes to the inside of the Unit must be closed off with a mastic material. To seal a Unit to the countertop, proceed as follows:

3. Carefully tilt the connected Unit up to expose the base.

4. Apply a silastic sealant eg. Dow Corning RTV 731 or equivalent on all base edges.

NOTE: When Unit is lowered into place, do not move it, or seal will be broken.

5. Lower Unit into exact operating position on the countertop.

6. Apply additional sealant around the Unit so that the sealant has a minimum radius of 1/2 Inch.

7. If lines are connected to the Unit through a hole in the countertop, seal the lines and plug the remaining opening with mastic material such as Permagum, or equivalent.

ADDENDUM B

SANITIZING THE SYSTEM (USA)

IMPORTANT: Only trained personnel should perform sanitizing procedures.

WARNING: Wear protective eyewear to avoid injury.

The syrup systems must be sanitized once every six months; whenever there is a flavor change, or an off– flavor is noted in the product. This is the “ambient” sanitizing procedure whereby syrup is first flushed from the system with water, then a detergent is introduced, followed by a second water flush. A sanitizer is next placed in the system and it is finally purged with syrup.

NOTE: Detergent solution must not be introduced into the carbontor.

SANITIZING THE BAG–IN–BOX SYRUP SYSTEMS

This is a procedure for sanitizing syrup systems of the Convertible Post–Mix Dispensers which have syrup pumps (P/N 0080, 0096, and 1275).

SANITIZE THE BAG–IN–BOX SYSTEM AS FOLLOWS:

1. At the Unit, disconnect electrical power.
2. Disconnect the syrup line–end connectors from the bag–in–box containers.
3. Wash each line–end fitting in warm water to remove syrup accumulation.
4. Install a bag valve (cut from an empty bag–in–box container) on each syrup line–end connector.
5. Fill a clean plastic 5–gallon container with potable (drinking) water.
6. Place the line–end connectors (with installed bag valves) into the water.
7. Place a waste container under the dispensing nozzle.

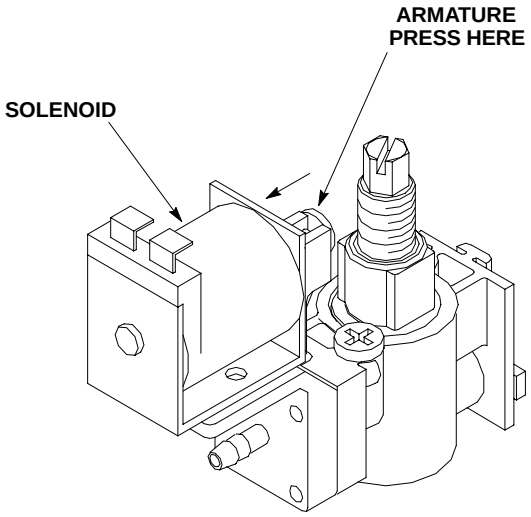


FIGURE 31. MANUAL OPERATION OF DISPENSING VALVES

8. Remove the small cover from the top of the Unit.
9. Manually open each syrup dispensing valve by pressing the armature of the solenoid forward to cause syrup and water to flow from the nozzle. (see Figure 31).
10. Hold each syrup solenoid dispensing valve open until only water is dispensed.
11. Remove the syrup line–end connectors from the water.
12. Fill the 5–gallon container with potable (drinking) water at room temperature (70 degrees to 100 degrees F) and add 3/4 ounce **per gallon of water** (6 ml Per liter) of Diversify DIVOFLOW 185, or equivalent detergent (to provide a sodium hydroxide solution*).
13. Mix the contents of the container thoroughly.
14. Place the syrup line–end connectors (with bag valves installed) into the detergent.
15. Hold each dispensing valve open until the water is displaced by the detergent.

CAUTION: To avoid damage to metallic parts of the system, do not allow the detergent solution to remain in a syrup system longer than 15 minutes.

16. Allow the detergent to remain the syrup systems for at least 10 minutes, but no longer than 15 minutes.

17. Remove the line–end connectors from the detergent.

18. Dispose of unused detergent in a sanitary sewer, not in a storm drain. Wash the container thoroughly.

19. Fill the 5–gallon container with potable (drinking) water. Place the line–end connectors in the water.

20. Hold each dispensing valve open until the detergent is displaced by the water.

21. Dispense a one–ounce sample of water from the nozzle. Test the sample using a drop of phenolphthalein indicator**. (This indicator becomes pink–colored in the presence of even small amounts of detergent) When the indicator remains clear, all detergent has been removed.

22. Remove the line–end connectors from the water.

23. Fill the 5–gallon container with 4 gallons (15.1 liters) of water at a temperature between 70 degrees F. to a maximum of 100 degrees F.

24. Add 1.0 oz. (29.57 ml) of H.B. Fuller Monarch C–S or equivalent sanitizer (to provide a 200 ppm 200 mg/liter active quaternary sanitizing solution) to the container. Mix thoroughly.

25. Place the syrup line–end connectors in the sanitizing solution.

26. Hold each dispensing valve open until only the sanitizing solution is dispensed.

27. Allow the sanitizing solution to remain in the syrup systems from eight to ten minutes.

CAUTION: To avoid damage to metallic parts of the system, do not allow the sanitizing solution to remain in the syrup systems longer than 15 minutes.

28. Remove syrup line–end connectors from the sanitizing solution and remove the bag valves from the line–end connectors. (Save the bag valve).

29. Connect each syrup line–end connector to the pre–selected syrup source.

30. Hold each dispensing valve open until the syrup purges the sanitizer from the lines, and only syrup is dispensed.

31. Replace the small cover on top of the Unit.

32. Connect electrical power to the Unit.

33. Dispense and taste each product for off–flavor.

34. Dispose of the waste sanitizing solution in the sanitary sewer, (not in storm drain). Rinse both containers.

SANITIZING THE SYRUP TANK SYSTEMS

This is a procedure for sanitizing syrup systems of the Convertible Post–Mix Dispensers which have syrup tanks (P/N 0088, 0097, and 1276).Sanitize the syrup systems as follows:

1. At the Unit, disconnect electrical power.

2. Remove the small cover from the top of the Unit.

3. Place a waste container under the dispensing nozzle.

4. Disconnect the syrup line–end connectors from the syrup tanks.

5. Wash each line–end fitting in warm water to remove syrup accumulation.

6. Fill a clean syrup tank with potable (drinking) water. Place a cover on the tank.

7. Apply CO_2 pressure to the tank

8. Flush syrup from the lines as follows:

   A. Connect one of the syrup line–end connectors to the syrup tank.

   B. Manually open the corresponding syrup system dispensing valve (by pressing the armature of the solenoid forward to cause syrup and water to flow from the nozzle, see Figure 31).

   C. Hold the dispensing valve open until only water is dispensed.

   D. Disconnect the syrup line–end connector from the syrup tank.

   E. Repeat steps a. through d. for the remaining syrup systems.

9. Remove CO_2 pressure from the tank.

10. Fill the syrup tank with water at room temperature (70 degrees to 100 degrees F) and add 3/4 ounce per gallon of water (6 ml per liter) of Diversify DIVOFLOW 185 or equivalent detergent (to provide a sodium hydroxide solution).

11. Mix the contents of the syrup tank thoroughly. Place a cover on the tank.

12. Apply CO_2 pressure to the tank.

13. Fill the syrup systems with detergent solution as follows:

CAUTION: To avoid damage to metallic parts of the system, do not allow the detergent solution to remain in syrup systems longer than 15 minutes.

A. Connect one of the syrup line–end connectors to the syrup tank.

B. Manually open the corresponding syrup system dispensing valve (by pressing the armature of the solenoid forward to cause water and detergent to flow from the nozzle).

C. Hold the dispensing valve open until only detergent is dispensed.

D. Disconnect the syrup line–end connector from the syrup tank.

E. Repeat steps a. through d. for the remaining syrup systems.

14. Allow the detergent to remain in the system for at least ten minutes, but no longer than 15 minutes.

15. Remove CO_2 pressure from the syrup tank.

16. Rinse the syrup tank thoroughly with water. Dispose of unused detergent in a sanitary sewer, (not in a storm drain).

17. Fill the syrup tank with potable (drinking) water. Place a cover on the syrup tank.

18. Apply CO_2 pressure to the syrup tank.

19. Purge the detergent from the syrup systems as follows:

A. Connect one of the syrup line–end connectors to the syrup tank.

B. Manually Open the corresponding syrup system dispensing valve (by pressing the armature of the solenoid forward to cause detergent and water to flow from the nozzle).

C. Hold the dispensing valve open until only water is dispensed.

D. Dispense a one–ounce sample of water from the nozzle. Test the sample using a drop of phenolphthalein indicator**. (This indicator becomes pink–colored in the presence of even small amounts of detergent. Thus, when the indicator remains clear, all detergent has been removed).

E. Disconnect the syrup line–end connector from the syrup tank.

F. Repeat steps a. through e. for the remaining syrup systems.

20. Remove CO_2 pressure from the tank.

21. Fill the syrup tank with 4 gallons (15.1 liters) of water at a temperature between 70 degrees F to a maximum of 100 degrees F.

22. Add 1.0 oz. (29.57 ml) of H.B. Fuller Monarch C–S or equivalent sanitizer (to provide a 200 ppm 200 mg/liter active quaternary sanitizing solution) to the container. Mix thoroughly.

23. Apply CO_2 pressure to the syrup tank.

24. Introduce sanitizer into syrup system as follows:

A. Connect one of the syrup end–line connectors to the syrup tank.

B. Manually open the corresponding syrup system dispensing valve (by pressing the armature of the solenoid forward to cause water and sanitizer to flow from the nozzle).

C. Hold the syrup system dispensing valve open until only sanitizer is dispensed.

D. Disconnect the syrup line–end connector from the syrup tank.

E. Repeat steps a. through d. for the remaining syrup systems.

CAUTION: To avoid damage to metallic parts of the system, do not allow the sanitizing solution to remain in the syrup system longer than 15 minutes.

25. Allow the sanitizing solution to remain in contact with the syrup systems from eight to ten minutes.

26. Connect each syrup line–end connector to a syrup tank of the pre–assigned flavor.

27. Manually open each syrup system dispensing valve to allow syrup to purge sanitizer from the syrup lines.

28. Hold each syrup system dispensing valve open until only syrup is dispensed.

29. Connect electrical power to the Unit.

30. Taste each dispensed product for off–flavor.

31. Remove CO_2 pressure from the syrup tank containing the sanitizer.

32. Rinse the sanitizer from the syrup tank and from the waster container. Dispose of the waste sanitizing solution in the sanitary sewer (not in the storm drain).

33. Replace the small cover on top of the Unit.

*Detergent to contain sodium hydroxide, be non–perfumed, and have low–sudsing and easily–rinsible characteristics. The sodium hydroxide should be between 2 percent and 10 percent in the concentrated detergent.

****WARNING: Phenolphthalein must be kept away from children, it is a powerful laxative and may cause serious illness if taken internally.**

WARRANTY

IMI Cornelius Inc. warrants that all equipment and parts are free from defects in material and workmanship under normal use and service. For a copy of the warranty applicable to your Cornelius, Remcor or Wilshire product, in your country, please write, fax or telephone the IMI Cornelius office nearest you. Please provide the equipment model number, serial number and the date of purchase.

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